Appendix E

Transportation Impact Analysis

Traffic Impact Study for Magee Ranch in the Town of Danville

Final Report

Prepared for:
The Town of Danville

Prepared by:
Stantec Consulting Services Inc.

June 25, 2018

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INTRODUCTION AND EXECUTIVE SUMMARY

INTRODUCTION

This report presents the results of a traffic impact analysis for the proposed Magee Ranch (herein referred to as "Project") located south of Diablo Road and Blackhawk Road between McCauley Road/Green Valley Road and Arends Drive in the Town of Danville. The proposed Project consists of building 69 new single family residential homes on approximately 30 acres of a 410-acre site that is currently used for cattle grazing.

Twenty-five percent of the single family lots are assumed to include accessory dwelling units. Although only 10 percent of the homes would be constructed with accessory units, the Town conservatively assumes that some future homeowners might add their own accessory units, bringing the total to 25 percent. Accordingly, the analysis of project traffic operations assumes a total of 17 accessory units in addition to the 69 single family homes.

Three homes are proposed to be built with access to McCauley Road via a new driveway (Cinch Court) intersection approximately 235 feet south of Diablo Road. The remaining 66 homes will have access to Blackhawk Road via a new main Project driveway (Appaloosa Street) intersection.

The purpose of this traffic study is to evaluate the effect of the proposed Project on the roadway network. The report includes the results of a traffic operations analysis, as well as an evaluation of internal circulation; external site access and driveway operations, including emergency access; adequacy of Project-provided parking; transit, bicycle, and pedestrian access, and impacts on bicycle safety.

SUMMARY

Traffic Operations

The proposed Project is expected to generate approximately 98 net new vehicle trips during the AM peak hour, 87 net new trips during the School PM peak hour, and 72 net new trips during the PM peak hour. Per the Town's significance thresholds for roadway congestion, the proposed Project would cause a significant impact under Existing plus Project Conditions during the AM and School PM peak hours at Intersection 7 (Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard).

The proposed Project would make a cumulatively considerable contribution to significant cumulative impacts in the year 2040 at Intersection 7 during the AM and School PM peak hours.

Traffic signals are warranted at Stone Valley Road & Green Valley Road and Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard intersections without the Project. The

intersection that would experience significant impact in the Existing plus Project and Cumulative plus Project (Intersection 7) scenarios currently operates with All-Way Stop Control (AWSC). Peak Hour Signal Warrant Analysis was conducted at the intersection and a traffic signal is warranted. Installation of a traffic signal at the significantly impacted location would improve operations to LOS B or better during all three peak hours, and Project-impacts would be considered satisfactorily mitigated.

Internal Site Circulation and Site Access

The proposed access driveways would provide adequate access for cars and small trucks to the site. Also, Appaloosa Street would be able to accommodate estimated queuing of six vehicles in each approach lane and Cinch Court would be able to accommodate approximately three or four queued vehicles.

Parking

The Project would include personal garages and driveways for each unit, in addition to available on-street parking and a four-space parking lot, which together meet the Town parking provision requirements.

Transit, Bicycle and Pedestrian Access

The Project vicinity is currently served by the TRAFFIX school bus program Routes GV8/GV9, LC8/LC9 and MV10, and the project sponsor shall coordinate with TRAFFIX to include a new stop on each route at the Project site. No other transit services exist in the immediate Project vicinity.

Bicycle and pedestrian access is expected to be enhanced with Project build-out as the Project would include a trail system available for public use. The trail system would provide a bicycle facility gap closure from a point west of Avenida Nueva and to the intersection of Blackhawk Road & Appaloosa Street. Additionally, the Project would provide a public trail easement of approximately 3,600 linear feet along the south side of Diablo Road from the on-site trail westward to a point near the intersection of Diablo Road & Alameda Diablo; the Town plans to use this easement to fill another gap in the surrounding pedestrian and bicycle facilities.

Bicycle Safety

Addition of Project traffic is not expected to cause a significant negative impact on existing bicycle conditions on Diablo Road/Blackhawk Road. Records show the study corridor between McCauley Road/Green Valley Road and Magee Ranch Road/Hidden Oak Drive does not experience a significant number of bicycle collisions. The Project is expected to enhance bicycle safety with an on-site, multi-use path and would create an opportunity for the Town to fill an additional gap in its bicycle facilities by providing right-of-way for another planned trail segment.

STUDY SCOPE AND APPROACH

STUDY SCOPE

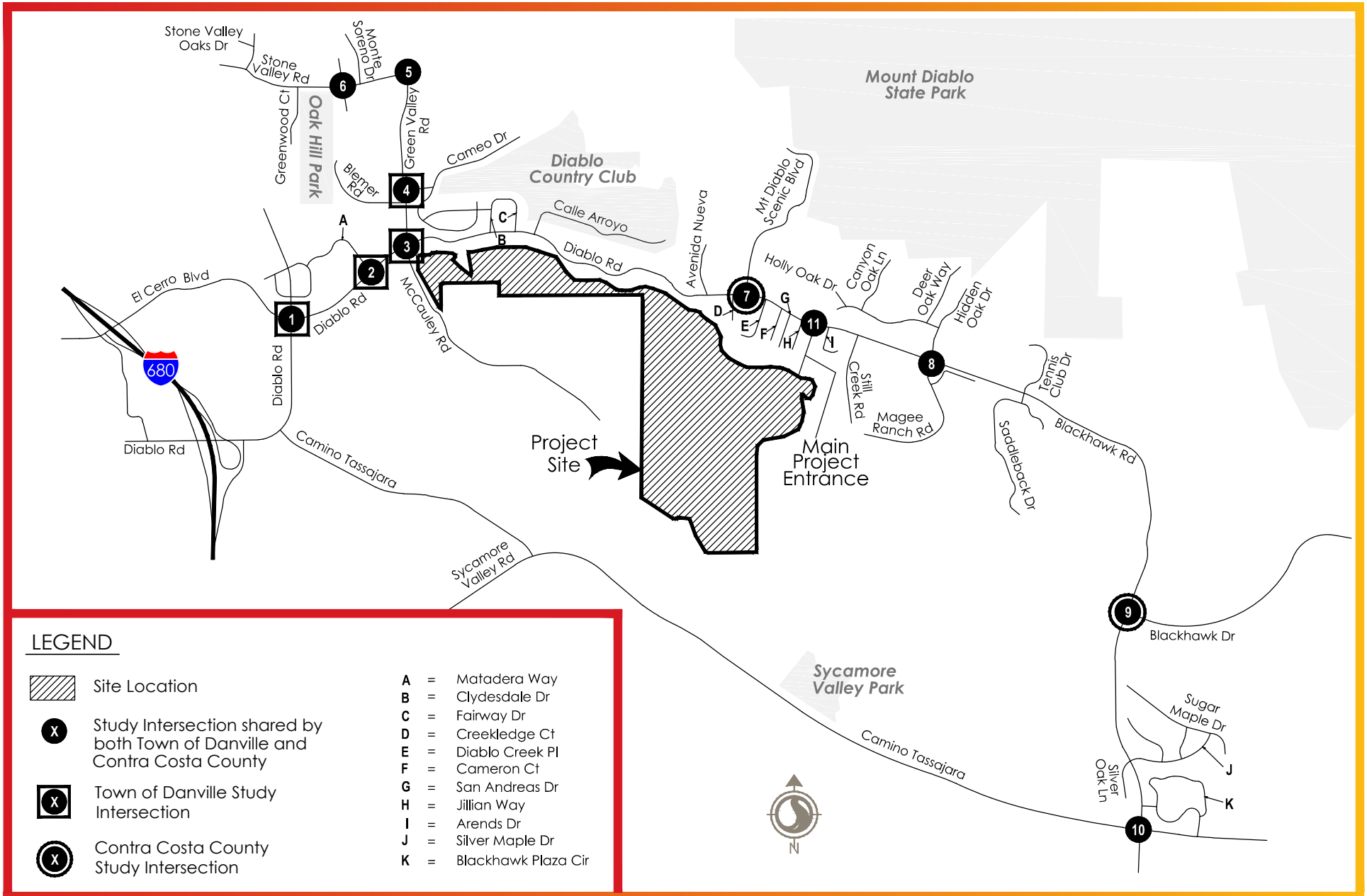
Stantec evaluated existing traffic conditions at ten study intersections during AM, School PM and commute PM peak hours for a typical weekday. The peak periods observed were 7:00-9:00 AM, 2:00-4:00 PM, and 4:00-6:00 PM, respectively. The study intersections and controls are as follows:

1. El Cerro Boulevard/Diablo Road & Diablo Road/Ackerman Drive [Signal]
2. Diablo Road & Matadera Way [Signal]
3. Diablo Road & McCauley Road/Green Valley Road [Signal]
4. Blemer Road/Cameo Drive & Green Valley Road [Signal]
5. Stone Valley Road & Green Valley Road [AWSC]
6. Stone Valley Road & Monte Vista High School Main Driveway [Signal]
7. Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard [AWSC]
8. Blackhawk Road & Magee Ranch Road/Hidden Oak Drive [Two-Way Stop Control (TWSC)]
9. Blackhawk Drive & Blackhawk Road [TWSC]
10. Camino Tassajara & Crow Canyon Road/Blackhawk Road [Signal]

Figure 1 illustrates the study intersections and proposed Project vicinity. Intersection 11 shown on **Figure 1** does not currently exist; it is the intersection of the proposed Project's Appaloosa Street with Blackhawk Road. **Figure 2** shows the Project site plan.

This study addresses the following four (4) traffic scenarios:

- *Existing Conditions* – This scenario evaluates current intersection conditions based on field surveys and existing vehicle, bicycle and pedestrian counts.
- *Existing plus Project Conditions* – This scenario is identical to Existing Conditions, but with the addition of proposed Project traffic.
- *Cumulative Conditions* – This scenario is based on projections from the latest Contra Costa Transportation Authority (CCTA) countywide Decennial model. 23-year incremental traffic growth was added to existing volumes to estimate 2040 traffic conditions. This scenario does not include the proposed Project traffic.
- *Cumulative plus Project Conditions* – This scenario is identical to Cumulative Conditions, but with the addition of proposed Project traffic.



Stantec

Town of Danville and Contra Costa County
Traffic Impact Study

Vicinity Map Figure 1

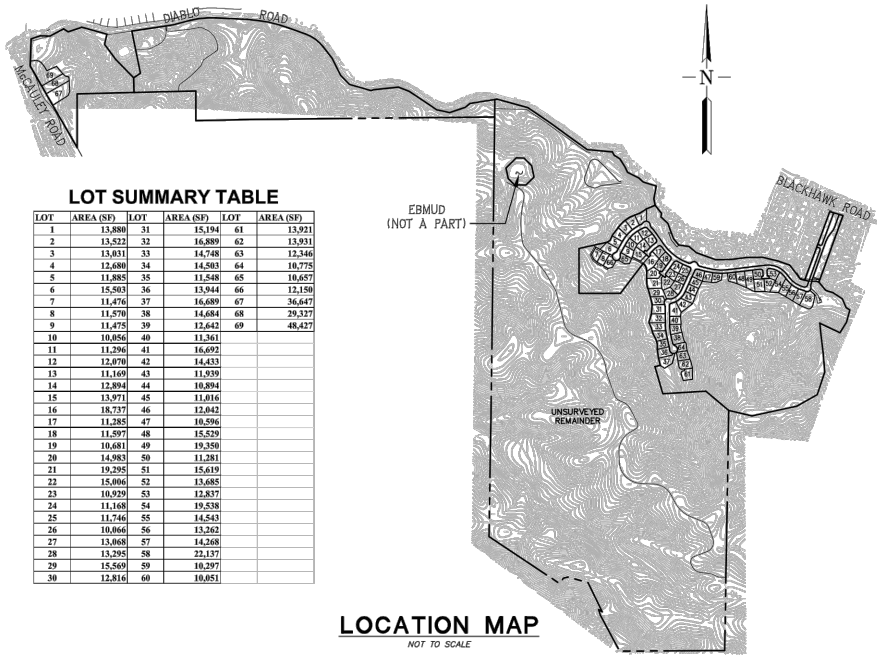
VESTING TENTATIVE MAP
SUBDIVISION 9291 - MAGEE RANCHES
TOWN OF DANVILLE, CONTRA COSTA COUNTY, CALIFORNIA

BENCHMARK

CONTRA COSTA COUNTY BENCHMARK # 1560
STANDARD CONTRA COSTA COUNTY BENCHMARK PLATE SET IN TOP OF CONCRETE HEADWALL OF DOUBLE BOX CULVERT, EAST SIDE OF GREEN VALLEY ROAD AT THE INTERSECTION OF DIABLO ROAD AND GREEN VALLEY ROAD.
ELEVATION = 429.118 1964 ADJ.

LEGEND

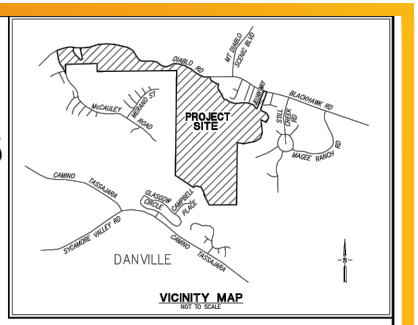
PROPOSED	DESCRIPTION	EXISTING
	TRACT BOUNDARY	
	LOT LINE	
	RIGHT OF WAY	
	CENTER LINE	
	RETAINING WALL	
	EASEMENT LINE	
12"SD	STORM DRAIN	EX 12"SD
8"SS	SANITARY SEWER	EX 8"SS
8"W	WATER	EX 8"W
	CURB & GUTTER	
	SIDEWALK	
	CONCRETE DITCH	
	SCENIC HILLSIDE LINE	
	RIDGE LINE	
	BUILDABLE AREA	
	STORM WATER INLET	
	FIELD INLET	
	MANHOLE	
	FIRE HYDRANT	
	BLOW OFF	
	WATER VALVE	
	WATER LATERAL WITH METER	
	STREET LIGHT	
	FENCE	
	SLOPE	
	HANDICAP RAMP	
	SAVE TREE	20" OAK (S)
	REMOVE TREE	10" OLIVE (R)
130	CONTOUR ELEVATIONS	130
x 525.2	SPOT ELEVATION	x525.2



LOT SUMMARY TABLE

LOT	AREA (SF)	LOT	AREA (SF)	LOT	AREA (SF)
1	13,880	31	15,194	61	13,921
2	13,522	32	16,889	62	13,931
3	13,031	33	14,748	63	12,346
4	12,680	34	14,503	64	10,775
5	11,885	35	11,548	65	10,657
6	15,503	36	13,944	66	12,150
7	11,476	37	16,689	67	36,647
8	11,570	38	14,684	68	29,327
9	11,475	39	12,642	69	48,427
10	10,856	40	11,361		
11	11,296	41	16,692		
12	12,070	42	14,433		
13	11,169	43	11,939		
14	12,894	44	10,894		
15	13,971	45	11,016		
16	18,737	46	12,042		
17	11,285	47	10,596		
18	11,597	48	15,529		
19	10,681	49	19,350		
20	14,983	50	11,281		
21	19,295	51	15,619		
22	15,006	52	13,685		
23	10,929	53	12,837		
24	11,168	54	19,538		
25	11,746	55	14,543		
26	10,066	56	13,262		
27	13,068	57	14,268		
28	13,295	58	22,137		
29	15,569	59	10,297		
30	12,816	60	10,051		

LOCATION MAP
NOT TO SCALE



VICINITY MAP
NOT TO SCALE

GENERAL NOTES:

1. OWNER: TEARDROP PARTNERS, L.P. AND MAGEE INVESTMENT COMPANY, 3189 DANVILLE BOULEVARD #240, ALAMO, CA 94507-1956, CONTACT: STEVE ABBS (925) 945-8000
2. DEVELOPER: DAVIDON HOMES, 1600 S. MAIN STREET, SUITE 150, WALNUT CREEK, CA 94596, CONTACT: STEVE ABBS (925) 945-8000
3. CIVIL ENGINEER: RUGGERI-JENSEN-AZAR, 4690 CHABOT DRIVE, SUITE 200, PLEASANTON, CA 94588, CONTACT: KIRK MYERS (925) 227-9100
4. SOILS ENGINEER: ENGEO, INCORPORATED, 2010 CROW CANYON PLACE, SUITE 250, SAN RAMON, CA 94583, CONTACT: PHILIP STUCCHELI (925) 866-9000
5. ASSESSOR'S PARCEL NUMBERS: 202-050-071-2, 202-050-073-8, 202-050-074-6, 202-050-078-7, 202-050-079-5, 202-050-080-3, 202-100-017-5, 202-100-019-1, 202-100-038-1, 202-100-040-7, 215-040-002-2
6. CURRENT USE: AGRICULTURE
7. CURRENT ZONING: A-2 AGRICULTURAL, A-4 AGRICULTURAL, P-1 PLANNED UNIT DISTRICT
8. PROPOSED USE: RESIDENTIAL
9. PROPERTY DESCRIPTION: A PORTION OF THE SOUTHWEST 1/4 OF SECTION 23, TOWNSHIP 1 SOUTH, RANGE 1 WEST, MOUNT DIABLO BASE AND MERIDIAN, AND NEW LOT 3 AS SHOWN ON LOT LINE ADJUSTMENT LLA 2005-02 RECORDED OCTOBER 20, 2005 AS INSTURMENT NO. 2005-406420 O.R., AND THE PARCEL DESCRIBED IN PARCEL MERGER 00-01, RECORDED MAY 15 2000 AS SERIES NO. 2000-0098839 O.R., AND LOT 2 AS SHOWN ON THE LOT LINE ADJUSTMENT LLA 91-6, RECORDED OCTOBER 15, 1991, AS SERIES NO. 91-216873 O.R.,
10. GROSS AREA: 410.1± ACRES
11. TOTAL NO. OF PROPOSED RESIDENTIAL LOTS: 69
12. UTILITIES:
    - WATER: EAST BAY MUNICIPAL UTILITY DISTRICT
    - GAS & ELECTRIC: PACIFIC GAS & ELECTRIC
    - SANITARY SEWER: CENTRAL CONTRA COSTA SANITARY DISTRICT
    - STORM DRAIN: CITY OF SAN RAMON, CONTRA COSTA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
    - FIRE: SAN RAMON VALLEY FIRE PROTECTION DISTRICT
    - TELEPHONE: AT&T
    - CABLE TV: COMCAST
13. BOUNDARY AS SHOWN IS COMPILED FROM RECORD INFORMATION.
14. ALL EROSION CONTROL MEASURES SHALL BE IN CONFORMANCE WITH THE CRITERIA AND STANDARDS OF THE TOWN OF DANVILLE.
15. AERIAL TOPOGRAPHY WAS FLOWN IN APRIL 2010.
16. THE PROPERTY LIES WITHIN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER 06013C 0455F, DATED JUNE 16, 2009.
17. MULTIPLE FINAL MAPS TO BE FILED AT THE DISCRETION OF THE OWNER/DEVELOPER.

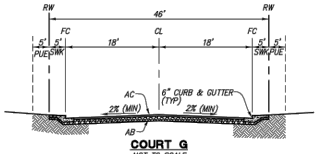
ABBREVIATIONS

AB	AGGREGATE BASE	LP	LOW POINT
AC	ASPHALT CONCRETE	MH	MANHOLE
AD	AREA DRAIN	PAE	PRIVATE ACCESS EASEMENT
BC	BEGINNING OF CURVE	PCC	POINT OF COMPOUND CURVE
BO	BLOW OFF	PL	PROPERTY LINE
BW	BOTTOM OF WALL	PRC	POINT OF REVERSE CURVE
CCCSD	CENTRAL CONTRA COSTA SANITARY DISTRICT	PSDE	PRIVATE STORM DRAIN EASEMENT
CL	CENTER LINE	PUE	PUBLIC UTILITY EASEMENT
CMP	CORRUGATED METAL PIPE	PVC	POLYVINYL CHLORIDE PIPE
CP	CENTER POINT	RCP	REINFORCED CONCRETE PIPE
CS	CURB STATION	RET	CURB RETURN
DWY	DRIVEWAY	RW	RIGHT OF WAY
DIP	DUCTILE IRON PIPE	SDE	STORM DRAIN EASEMENT
EC	END OF CURVE	SNS	STREET NAME SIGN
EVAE	EMERGENCY VEHICLE ACCESS EASEMENT	SO	SIDE OPENING INVERT
EX	EXISTING	SSCO	SANITARY SEWER CLEAN OUT
FC	FACE OF CURB	STA	STATION
FG	FINISHED GRADE	SWI	STORM WATER INLET
FI	FIELD INLET	SWK	SIDEWALK
FL	FLOW LINE	TC	TOP OF CURB
GB	GRADE BREAK	TW	TOP OF WALL
GHAD	GEOLOGIC HAZARD ABATEMENT DISTRICT	WM	WATER METER
GR	GRATE		
HP	HIGH POINT		
INV	INVERT ELEVATION		

SHEET INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SITE PLAN
3	SITE PLAN
4	SITE PLAN
5	GRADING PLAN
6	GRADING PLAN
7	GRADING PLAN
8	UTILITY PLAN
9	UTILITY PLAN
10	UTILITY PLAN
11	STORM WATER TREATMENT
12	STORM WATER TREATMENT
13	STORM WATER TREATMENT

RJA
RUGGERI-JENSEN-AZAR
ENGINEERS • PLANNERS • SURVEYORS
4690 CHABOT DRIVE, SUITE 200 PLEASANTON, CA 94588
PHONE: (925) 227-9100 FAX: (925) 227-9300



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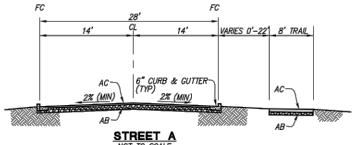

STREET A
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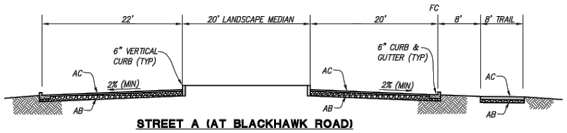

STREET A (AT BLACKHAWK ROAD)
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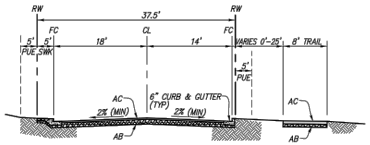

STREET B
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LOT SUMMARY TABLE

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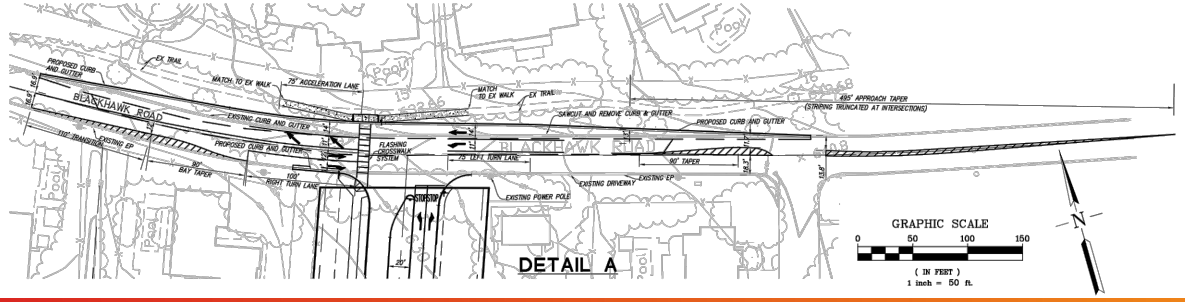
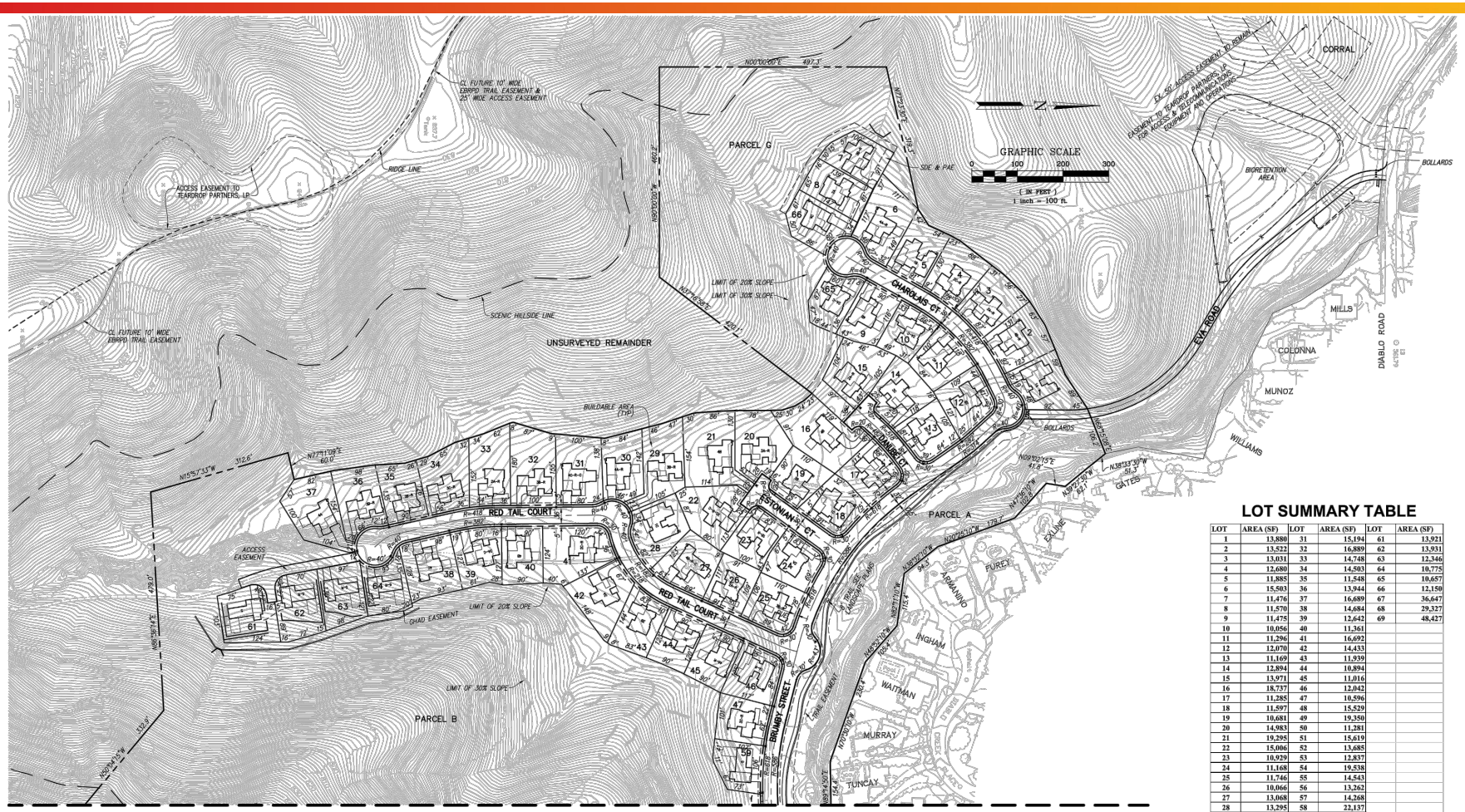


SITE PLAN
SUBDIVISION 9291 - MAGEE RANCHES

TOWN OF DANVILLE, CONTRA COSTA COUNTY, CALIFORNIA

RJA
RUGGERI-JENSEN-AZAR
ENGINEERS • PLANNERS • SURVEYORS
4690 CHABOT DRIVE, SUITE 200 PLEASANTON, CA 94588
PHONE: (925) 227-9100 FAX: (925) 227-9300

DATE: JULY 24, 2017 JOB NO. 091015 SHEET 2 OF 13 SHEETS



MATCH LINE - SEE SHEET 2

LOT SUMMARY TABLE

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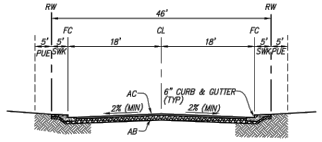
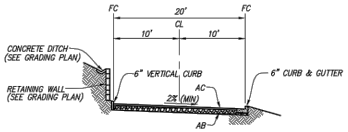
18	11,597	48	15,529		
19	10,681	49	19,350		
20	14,983	50	11,281		
21	19,295	51	15,619		
22	15,086	52	13,685		
23	10,929	53	12,837		
24	11,168	54	19,538		
25	11,746	55	14,543		
26	10,066	56	13,262		
27	13,068	57	14,268		
28	13,295	58	22,137		
29	15,569	59	10,297		
30	12,816	60	10,051		



COURT C,D,E,F
NOT TO SCALE



EVA ROAD
NOT TO SCALE

SITE PLAN
SUBDIVISION 9291 - MAGEE RANCHES

TOWN OF DANVILLE, CONTRA COSTA COUNTY, CALIFORNIA

RUGGERI-JENSEN-AZAR
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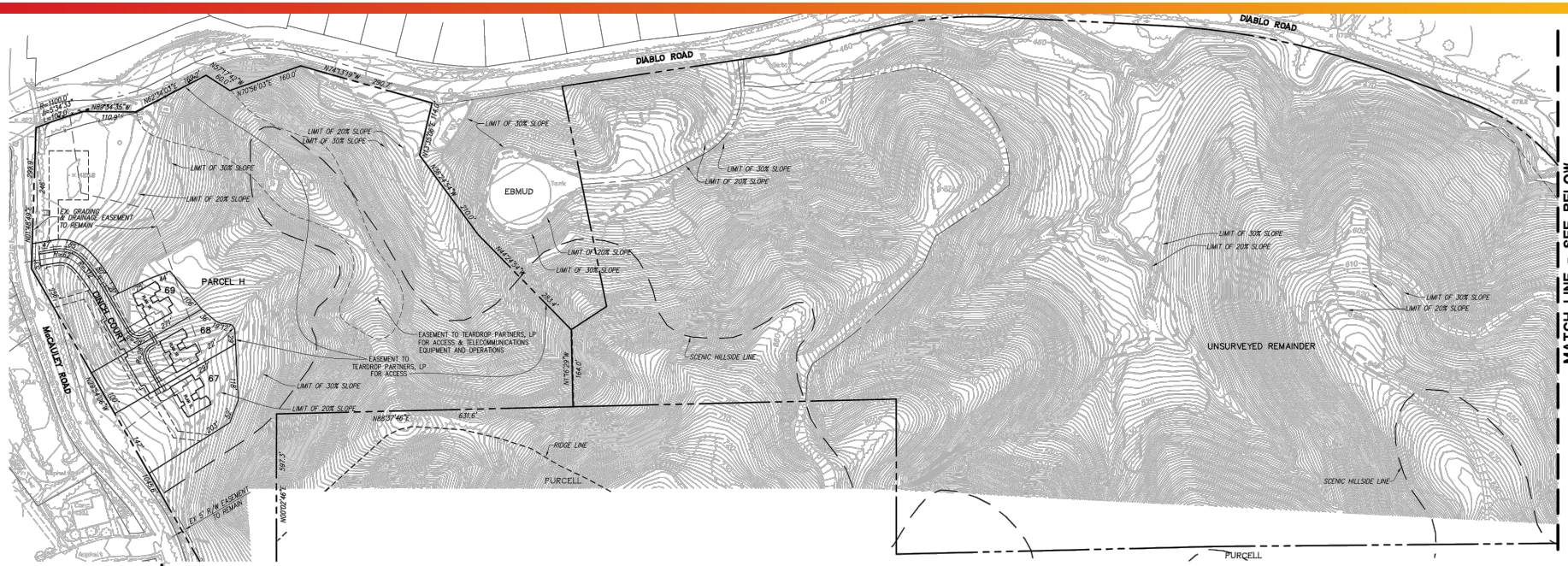
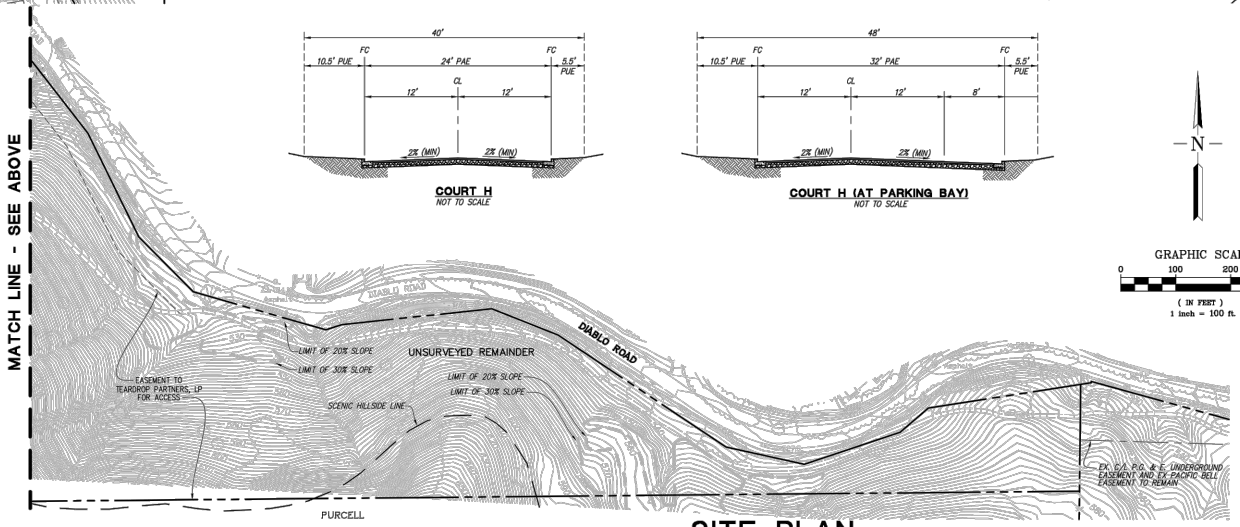
DATE: JULY 24, 2017 JOB NO. 091015 SHEET 3 OF 13 SHEETS

Town of Danville and Contra Costa County
Traffic Impact Study

Stantec

Site Plan Sheet 3 Figure 2c





COURT H
NOT TO SCALE

COURT H (AT PARKING BAY)
NOT TO SCALE

N

GRAPHIC SCALE
0 100 200 300
(IN FEET)
1 inch = 100 ft.

LOT SUMMARY TABLE

LOT	AREA (SF)	LOT	AREA (SF)	LOT	AREA (SF)
1	13,880	31	15,194	61	13,921
2	13,522	32	16,889	62	13,931
3	13,031	33	14,748	63	12,346
4	12,680	34	14,503	64	10,775
5	11,885	35	11,548	65	10,657
6	15,503	36	13,944	66	12,150
7	11,476	37	16,689	67	36,647
8	11,570	38	14,684	68	29,327
9	11,475	39	12,642	69	48,427
10	10,056	40	11,361		
11	11,296	41	16,692		
12	12,070	42	14,433		
13	11,169	43	11,939		
14	12,894	44	10,894		
15	13,971	45	11,016		
16	18,737	46	12,042		
17	11,285	47	10,596		
18	11,597	48	15,529		
19	10,681	49	19,350		
20	14,983	50	11,281		
21	19,295	51	15,619		
22	15,006	52	13,685		
23	10,929	53	12,837		
24	11,168	54	19,538		
25	11,746	55	14,543		
26	10,066	56	13,262		
27	13,068	57	14,268		
28	13,295	58	22,137		
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SITE PLAN
SUBDIVISION 9291 - MAGEE RANCHES

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TOWN OF DANVILLE STANDARDS

Per the Town of Danville 2030 General Plan, level of service (LOS) "D" is generally considered the acceptable LOS threshold. Policy 14.03, with explanatory text in italics, provides:

"Maintain LOS standards for Danville streets which balance vehicle speed and travel time objectives with other considerations, such as the safety and comfort of pedestrians, bicyclists, and transit users. Standards may vary according to roadway function and the character of surrounding uses."

LOS standards for designated Routes of Regional Significance will be consistent with those established by the CCTA. On local roads, LOS "D" will remain the threshold, except in locations (to be specifically identified through the California Environmental Quality Act process) where the Town determines that LOS D cannot be maintained due to traffic originating outside of Danville.

CONTRA COSTA TRANSPORTATION AUTHORITY STANDARDS

The CCTA was originally formed in 1988 to manage funds generated by the transportation sales tax established by Measure C and later renewed by Measure J in 2004. As Contra Costa's transportation sales tax agency, the CCTA oversees design and construction of transportation projects included in Measure C and Measure J expenditure plans, carries out programs included in the expenditure plans (most notably the County's Growth Management Program), and provides financial structure that ensures optimum use of sales tax dollars.

In 1990, the CCTA became the Congestion Management Agency (CMA) for Contra Costa County. In that capacity, CCTA is the County's primary transportation planning agency. As the CMA, CCTA prepares the countywide Congestion Management Program, monitors level of service on County roadways and works with other CMAs and agencies to address regional issues. HCM 2010 is the primary methodology used to analyze traffic impacts per the CCTA Technical Procedures, 2013.

TRI-VALLEY TRANSPORTATION COUNCIL (TVTC) STANDARDS

The TVTC includes the Town of Danville, Cities of Dublin, Livermore, Pleasanton and San Ramon, and unincorporated areas of Alameda and Contra Costa Counties. Founded in 1991, the TVTC completed the first *Tri-Valley Transportation Plan/Action Plan for Routes of Regional Significance* (TV TP/AP) in 1995. The TV TP/AP establishes shared traffic service objectives and presents a list of high-priority transportation improvement projects to ease regional traffic congestion. The Tri-Valley Transportation Development Fee on new developments will fund these improvements. Since 1995, the TV TP/AP has been updated several times, most recently in September 2017. It provides the applicable significance criteria for Intersection 10 – Camino Tassajara & Crow Canyon Road/Blackhawk Road.

LEVEL OF SERVICE ANALYSIS METHODOLOGY

Signalized and Unsignalized Intersections and Roadways

LOS analysis is conducted to determine if a proposed project would induce substantial additional travel, requiring additional capacity in congested areas. LOS is a qualitative measure describing operational conditions within a traffic stream. There are six levels of service defined for each type of facility (i.e., roadway or intersection) that is analyzed. LOS has letter designations ranging from A to F, with LOS A representing free flow traffic with little or no delay and LOS F representing jammed conditions with excessive delay and long back-ups. Procedures for analyzing each type of facility are based on the *Highway Capacity Manual 2010* (*HCM 2010*). LOS for each study intersection was determined utilizing the Synchro 9 software package. **Table 1** and **Table 2** provide LOS definitions per *HCM 2010*.

Table 1: HCM 2010 Signalized Intersection Level of Service Definitions

LOS	Description
A	Very low control delay, up to 10 seconds per vehicle and V/C ratio no greater than 1.0. Typically assigned when the V/C ratio is low and either progression is extremely favorable or the cycle length is very short. If due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.
B	Control delay greater than 10 and up to 20 seconds per vehicle and V/C ratio no greater than 1.0. Typically assigned when the V/C ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.
C	Control delay greater than 20 and up to 35 seconds per vehicle and V/C ratio no greater than 1.0. 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.
D	Control delay greater than 35 and up to 55 seconds per vehicle and V/C ratio no greater than 1.0. Typically assigned when the V/C ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.
E	Control delay greater than 55 and up to 80 seconds per vehicle and V/C ratio no greater than 1.0. Typically assigned when the V/C ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.
F	Control delay exceeds 80 seconds per vehicle or V/C ratio greater than 1.0. Typically assigned when the V/C ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Table 2: HCM 2010 Unsignalized Intersection Level of Service Definitions

LOS	Description
A	Very low control delay, up to 10 seconds per vehicle for each movement subject to delay and V/C ratio no greater than 1.0.
B	Control delay greater than 10 and up to 15 seconds per vehicle for each movement subject to delay and V/C ratio no greater than 1.0.
C	Control delay greater than 15 and up to 25 seconds per vehicle for each movement subject to delay and V/C ratio no greater than 1.0.
D	Control delay greater than 25 and up to 35 seconds per vehicle for each movement subject to delay and V/C ratio no greater than 1.0.
E	Control delay greater than 35 and up to 50 seconds per vehicle for each movement subject to delay and V/C ratio no greater than 1.0.
F	Control delay exceeds 50 seconds per vehicle for each movement subject to delay or V/C ratio greater than 1.0.

All the study intersections are in the Town of Danville and Contra Costa County, and are subject to the respective LOS standards. Except for intersections on Routes of Regional Significance, the Town of Danville applies its own thresholds of significance to all study intersections, regardless of whether they are in Danville or the County. Danville generally uses a LOS standard of mid-range "D" for signalized intersections. The LOS standard for signalized intersections on Routes of Regional significance is LOS "E" with a corresponding V/C ratio defined by the TV TP/AP.

While the Danville General Plan does not establish a LOS standard for unsignalized intersections, it is the Town's practice to include these intersections as a part of the operational analysis in an effort to fully understand the potential traffic impacts that may result from the proposed project.

If a signalized or unsignalized intersection or roadway segment is already operating at an unacceptable LOS, an increase of 5 percent to the V/C ratio would constitute a significant project impact. Based on the expert opinions of the Town's traffic consultants and traffic engineering staff and historic variations in daily traffic volume, it is determined that a 5-percent threshold increase is a conservative but appropriate measurement of an adverse change to an intersection. This threshold applies to existing conditions that are already unacceptable, or are projected to be unacceptable under Cumulative Conditions even without the project. To provide a consistent methodology, these significance criteria are applied for both signalized and unsignalized intersections.

Bicycle Facilities

In reviewing the various and non-standardized methods currently utilized to evaluate bicycle facilities, the Town and Stantec determined that *HCM 2010* is the most current, standardized, and nationally recognized methodology available. *HCM 2010* is accepted industry-wide as a technical reference that is the product of extensive analysis and professional peer-review.

Under *HCM 2010*, bicycle level of service (BLOS) for urban street segments is based on a BLOS score, which is calculated using a traveler-perception model. **Table 3** summarizes BLOS scores and their associated LOS. The overall BLOS score is based on the following variables:

- Bicycle Running Speed
- Bicycle Delay at Intersection
- Bicycle Travel Speed
  - Segment length
  - Segment running time
- Bicycle LOS Score for Intersection
- Bicycle LOS Score for Link
  - Roadway cross-section
  - Motorized vehicle volumes
  - Motorized vehicle speeds
  - Heavy vehicle (truck) percentage
  - Pavement condition
  - Number of through lanes
- Bicycle LOS Score for Segment
  - Number of access points on right side in the subject direction of travel

For purposes of this study, HCM BLOS methodology was selected to determine levels of bicycle operations as it considers many aspects associated with rider comfort and safety. Of the above listed parameters, Bicycle Running Speed, Bicycle Delay at Intersection, and Bicycle Travel Speed are associated with rider comfort and typically include single variable functions (e.g., Bicycle Running Speed is assumed at 15 mph; Delay is dependent on traffic signal timing if applicable; and Travel Speed is dependent on segment length).

The remaining parameters are associated with bicycle safety and have a more significant impact on the BLOS calculation. Of the safety-related variables, the most influential in BLOS calculations are roadway cross-section (lane and shoulder widths, etc.) and right-hand access-point density. These parameters are most critical as they represent physical constraints of the roadway and are directly linked to bicyclist safety. Wide lanes typically enhance bicycle safety with more room for maneuvering. Access-point density is crucial in bicycle safety as right-hand access points (e.g., driveways and minor street intersections) produce conflicts between through-travelling bicycles and right-turning vehicles. High access-point density cannot be remedied without physical roadway alteration.

Table 3: HCM 2010 Bicycle Mode Level of Service Criteria

LOS	BLOS Score
A	≤ 2.00
B	> 2.00 – 2.75
C	> 2.75 – 3.50
D	> 3.50 – 4.25
E	> 4.25 – 5.00
F	> 5.00

Town staff measured the 85th percentile (critical) speed for vehicles on Diablo Road between Alameda Diablo and Avenida Nueva in 2012 and 2015 during off-peak hours. The measured critical speed was nearly 40 mph and Town staff directed that this analysis assume 40 mph for three reasons:

1. *HCM 2010* recommends using measured 85th percentile speed for BLOS analysis when possible. The methodology permits use of posted speed limits when critical speed is unavailable, but could produce less reliable analysis results.
2. Traffic speed during the congested time periods, such as the morning and evening commute periods, would be much lower than 40 mph.
3. Analyzing all scenarios with 40 mph vehicle speeds represents a conservative approach.

The Diablo Road/Blackhawk Road corridor is separated into five segments for BLOS analysis:

1. McCauley Road/Green Valley Road to Calle Arroyo [2,850 linear feet (LF)]
2. Calle Arroyo to Alameda Diablo [455 LF]
3. Alameda Diablo to Avenida Nueva [4,020 LF]
4. Avenida Nueva to Diablo Creek Place [1,334 LF]
5. Diablo Creek Place to Magee Ranch Road/Hidden Oak Drive [3,915 LF]

Lane and shoulder widths are two of the most critical variables in BLOS calculations, and Diablo Road/Blackhawk Road has varying cross-sectional widths. Measurements along Diablo Road/Blackhawk Road were taken in 100-foot intervals to identify lane and shoulder widths in each direction of travel. From various spot measurements along the corridor, average lane and shoulder widths were determined for each BLOS study segment. Averages along each segment provide a conservative but appropriate approach to understand bicycle level of comfort on the study corridor. The measurements, collected in December 2017, and averages thereof are provided in **Appendix K**.

THRESHOLDS OF SIGNIFICANCE

For purposes of this study and the Town's significance criteria, the project would result in a significant adverse impact on the environment if it would:

1. Cause a signalized intersection to fall from LOS D (or better) to LOS E (or worse); or
2. Cause an increase in the V/C ratio of 5 percent or more at a signalized or unsignalized intersection that is already, and projected to continue, operating at LOS E (or worse); or
3. Cause a signalized intersection along a Route of Regional Significance to exceed the Multi-modal Transportation Service Objectives (MTSOs) established by the TV TP/AP; or
4. Cause unsafe conditions for pedestrians or bicyclists; or
5. Cause a substantial increase in hazards due to design feature(s) (e.g., sharp curves, dangerous intersections, etc.) or incompatible use; or
6. Cause conflict with adopted policies, plans, or programs supporting alternative transportation.

The project-specific traffic threshold of significance used for this Project was based on an analysis of what would be a perceptible change in existing traffic congestion along the study corridor. For many jurisdictions, an imperceptible change in congestion (e.g., due to the normal daily fluctuations of traffic throughout the year) is considered insignificant.

The Town conducted an analysis of the Diablo Road & McCauley Road/Green Valley Road intersection in recent years and measured the average change (amount of normal fluctuation) of the intersection's V/C ratio. The V/C ratio is a measurement of congestion at an intersection.

During the period between the years of 2004-2010, the overall average change in the V/C ratio was 0.064 (AM Peak) and 0.080 (School PM Peak). During the period between the years of 2008-2010, which discounts the pre-recession years where high traffic volumes may skew the average, the overall average change in the V/C ratio is 0.057 (AM Peak) and 0.073 (School PM Peak).

Table 4: V/C Ratio Comparisons

Count Date	AM Peak	Delta	School PM Peak	Delta
May 2004	0.78	-	N/A	-
November 2004	0.65	0.13	0.61	-
May 2006	0.63	0.02	0.71	0.10
September 2008	0.70	0.07	0.56	0.15
September 2009	0.69	0.01	0.57	0.01
October 2010	0.60	0.09	0.51	0.06
Overall Average (2004-2010)		0.064		0.080
Recessionary Average (2008-2010)		0.057		0.073

As illustrated above, the Town elected to use the lowest average change in the V/C ratio (0.05) as a conservative measurement of perceptibility. In other words, if a project caused the V/C ratio of an intersection to increase by 0.05 (five percent) or more at a signalized or unsignalized intersection, then the change is considered perceptible (beyond normal) and would therefore be considered significant.

Signalized Intersections

The LOS for signalized intersections is analyzed using two methodologies:

1. Contra Costa Transportation Authority (CCTALOS) method
2. *HCM 2010* method

TRAFFIX software was used to apply the CCTALOS methods and Synchro 9 software was used to apply *HCM 2010* methods for evaluation of conditions at signalized intersections.

CCTALOS is a simplified method that expresses LOS conditions in terms of total V/C ratios. It does not consider signal timing, queue lengths, delay or storage capacity. CCTALOS methodology is a minimum requirement of the CCTA, and its calculations are included in the appendix for CCTA's Measure J compliance reporting purposes.

The Town of Danville uses the HCM method, which evaluates signalized intersection operations based on average control delay time for all vehicles at the intersection. *Control delay* is the amount of delay that is attributed to the specific traffic control device at the intersection and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. As such, and per the Town of Danville, the LOS in this study is reported using the *HCM 2010* methodology because it provides a more accurate indication and represents a more

conservative expression of intersection operation. **Table 1** documents the correlation between average delay and LOS.

Unsignalized Intersections

LOS at unsignalized intersections in the Town of Danville and Contra Costa County is based on the *HCM 2010* method. Synchro 9 software was used to apply the methodology for evaluation of conditions at unsignalized intersections. TRAFFIX software was not used for the analysis of unsignalized intersections due to its inability to apply the *HCM 2010* method. *HCM 2010* provides separate analysis methods for AWSC and TWSC intersections. **Table 2** documents the correlation between unsignalized intersection delay and LOS. For AWSC intersections, the reported LOS and delay represent the average delay of all intersection movements, and for TWSC intersections the reported LOS and delay represent the critical (worst) approach delay.

Bicycle Safety

Like intersection LOS analysis, BLOS analysis is performed using *HCM 2010* methodology. The BLOS scores are calculated using equations provided in Chapter 16 and Chapter 17 of *HCM 2010* and are then compared with the letter grade ranges in **Table 3**. Calculations of BLOS scores are dependent on multiple variables, including the physical conditions of the area in addition to the traffic patterns observed.

The methodology yields estimated performance measures for bicycle travel speed and LOS scores for the link and segment with the assumption that bicycles travel in the street (possibly in a bicycle lane) and in the same direction as adjacent motorized vehicles. The Town considers a bicycle safety impact to be significant if a project causes BLOS to fall from acceptable BLOS D or better to BLOS E or F, or if a segment is operating at BLOS E or F without the project, if the project causes a degradation in BLOS score of five percent or more.

This is consistent with the Town's project-specific threshold of significance used for the analysis of vehicular trips on Diablo Road, based on an analysis of what would be a perceptible change in existing traffic congestion along the Diablo Road corridor. For many jurisdictions, an imperceptible change in congestion (e.g., due to the normal daily fluctuations of traffic throughout the year) is considered insignificant.

Parking

The Town of Danville Municipal Code provides requirements for parking based on a given land use and current Town zoning. Per the Municipal Code – Chapter 32, Section 22, Sub-Section 13, a minimum of two off-street parking spaces per lot is required for single-family residential housing. Also, "The spaces shall be provided in an enclosed garage structure that meets the setback requirements of each district."

SETTING

This section describes existing transportation conditions in the Project vicinity with descriptions of the existing roadway network, transit network, and pedestrian and bicycle conditions.

ROADWAY NETWORK

Blackhawk Road is a two- to four-lane roadway that runs between Mt. Diablo Scenic Boulevard and Camino Tassajara with average daily traffic (ADT) of approximately 10,100 vehicles per day (VPD) in 2017. The road facilitates east-west and north-south movement providing access to residential neighborhoods, schools and places of employment, and has posted speed limits between 35 and 45 mph. Bike lanes are present between Blackhawk Plaza Circle and San Andreas Drive, and on-street parking is only available near its intersection with Blackhawk Drive. A continuous path/sidewalk is provided on the north/east side of the road.

Camino Tassajara is a two- to six-lane roadway that runs between Diablo Road in Danville and Tassajara Road in Pleasanton with ADT between 27,000 and 29,000 VPD in 2017. It provides access to residential neighborhoods, schools, public parks and facilities and places of employment, and has posted speed limits between 35 and 45 mph. Bike lanes are present between Diablo Road and Crow Canyon Road/Blackhawk Road and between Tassajara Ranch Drive and Finley Road, and on-street parking is available between Diablo Road and Sycamore Valley Road. Continuous paths/sidewalks are present on both sides of Camino Tassajara between Diablo Road and the Mustang Soccer League driveway.

Crow Canyon Road is a two- to eight-lane roadway that runs between E Castro Valley Boulevard and Camino Tassajara with ADT of approximately 24,400 VPD in 2017. It provides intraregional access to residential neighborhoods, schools, public parks and facilities and places of employment, and has posted speed limits between 40-50 mph. Bike lanes are present between E Castro Valley Boulevard and Cull Canyon Road, and between Alcosta Boulevard and Camino Tassajara, and on-street parking is available between E Castro Valley Boulevard and Cull Canyon Road. Discontinuous sidewalks are present on both sides of Crow Canyon Road between E Castro Valley Boulevard and Bollinger Canyon Road, and continuous sidewalks are present on both sides between Bollinger Canyon Road and Camino Tassajara.

Diablo Road is a two- to four-lane roadway that runs between Hartz Avenue and Mt. Diablo Scenic Boulevard with ADT between 14,000 and 23,000 VPD in 2017. The road primarily facilitates east-west movement providing access to Downtown Danville, residential neighborhoods, schools, and public parks and facilities, and has posted speed limits between 25-35 mph. Bike lanes are present between Via Hermosa in the west and McCauley Road/Green Valley Road in the east. On-street parking is permitted along some portions of the road, and sidewalks are located on both sides between Hartz Avenue and I-680 northbound off-ramp, and between Camino Tassajara and McCauley Road/Green Valley Road. Between McCauley Road/Green Valley Road and Calle Arroyo, a pedestrian/bicycle pathway is available on the north side.

El Cerro Boulevard is a two-lane roadway that runs between Danville Boulevard and Diablo Road/Ackerman Drive with ADT of approximately 10,900 VPD in 2017. It provides access to residential neighborhoods, schools, and public parks and facilities, and has a posted speed limit of 30 mph. Bike lanes are present along its entirety, and on-street parking is available near Danville Boulevard, between La Gonda Way and W El Pintado, and between Adobe Court/El Pintado Road and Diablo Road/Ackerman Drive. A continuous sidewalk is present on the south side of El Cerro Boulevard, with a discontinuous sidewalk available on the north side.

Green Valley Road is a two-lane north-south roadway that runs between Diablo Road and the Macedo Ranch Staging Area with ADT of approximately 13,700 VPD in 2017. It provides access to residential neighborhoods, schools, and public parks and facilities, and has a posted speed limit of 30 mph. Bike lanes are present between Diablo Road and Stone Valley Road with limited on-street parking. A continuous sidewalk is present on the west side of the street, and sidewalk is provided on the east side between Waingarth Way and Stone Valley Road.

Stone Valley Road is a two-lane roadway that runs between Lunada Lane and Golden Ridge Road in Alamo with ADT of approximately 10,300 VPD in 2017. It facilitates east-west movement providing access to residential neighborhoods, schools, and public parks and facilities, and has posted speed limits of 25 and 35 mph. Bike lanes are present between Danville Boulevard and Green Valley Road, and on-street parking is available between Lunada Lane and Danville Boulevard, and between Monte Sereno Drive and Green Valley Road. A continuous sidewalk is provided on the north side of the road, with discontinuous sidewalk available on the south side.

TRANSIT SERVICE

Transit service in Danville is provided by the Central Contra Costa Transit Authority (CCCTA). The Project site has no transit service available in the vicinity. Transit riders have access to Lines 21, 92X and 95X from the Danville Park and Ride off Sycamore Valley Road at the I-680 interchange. Line 21 also has various stops along Danville Boulevard, Railroad Avenue and San Ramon Valley Boulevard.

The closest Bay Area Rapid Transit (BART) stations to the Project site are the Walnut Creek and Dublin-Pleasanton stations, located approximately 11 and 13 miles away, respectively. The closest access to the Altamont Commuter Express (service to San Jose and Stockton) is at the Pleasanton Station, approximately 17 miles south of the Project site.

The Town participates in the Measure J Traffic Congestion Relief Agency, an independent joint powers authority known as TRAFFIX, which is a traffic congestion relief program funded by Measure J (1/2 cent sales tax extended by Contra Costa voters in 2004). It is meant to reduce school related traffic along some of San Ramon Valley's most congested corridors. Near the Project, there are two TRAFFIX bus routes (LC8 and LC9) serving Los Cerros Middle School, two routes (GV8 and GV9) serving Green Valley Elementary School, and one route (MV10) serving Monte Vista High School. TRAFFIX began service in 2009 and is funded by a percentage of the Measure J tax revenues, which is expected to conclude in 2034 unless reinstated by voters.

BICYCLE FACILITIES

Stantec assessed existing bicycle conditions through field surveys on April 26, 2017, and review of the 2030 Town of Danville General Plan and 2017 Parks, Recreation and Arts Strategic Plan. Bicycle facilities are divided into three classes:

- *Class I* routes operate within a completely separate right-of-way and are exclusively used by bicycles and pedestrians.
- *Class II* routes, commonly called bike lanes, operate in a striped, restricted lane within the right-of-way of a street. Motor vehicles are prohibited from using this lane, although cross-flows in and out of parking spaces and onto cross-streets are permitted.
- *Class III* routes, or bike routes, operate within moving traffic lanes and are distinguished only by signs or pavement markings. Bicycles share the right-of-way with vehicles.

A Class I multi-use pathway is found on Diablo Road between McCauley Road/Green Valley Road and Calle Arroyo, and the Town is currently conducting a gap closure study (CIP NO. C-055) for Diablo Road between Calle Arroyo and Avenida Nueva.

Currently, Class II bike lanes are found in the study vicinity on the following roads:

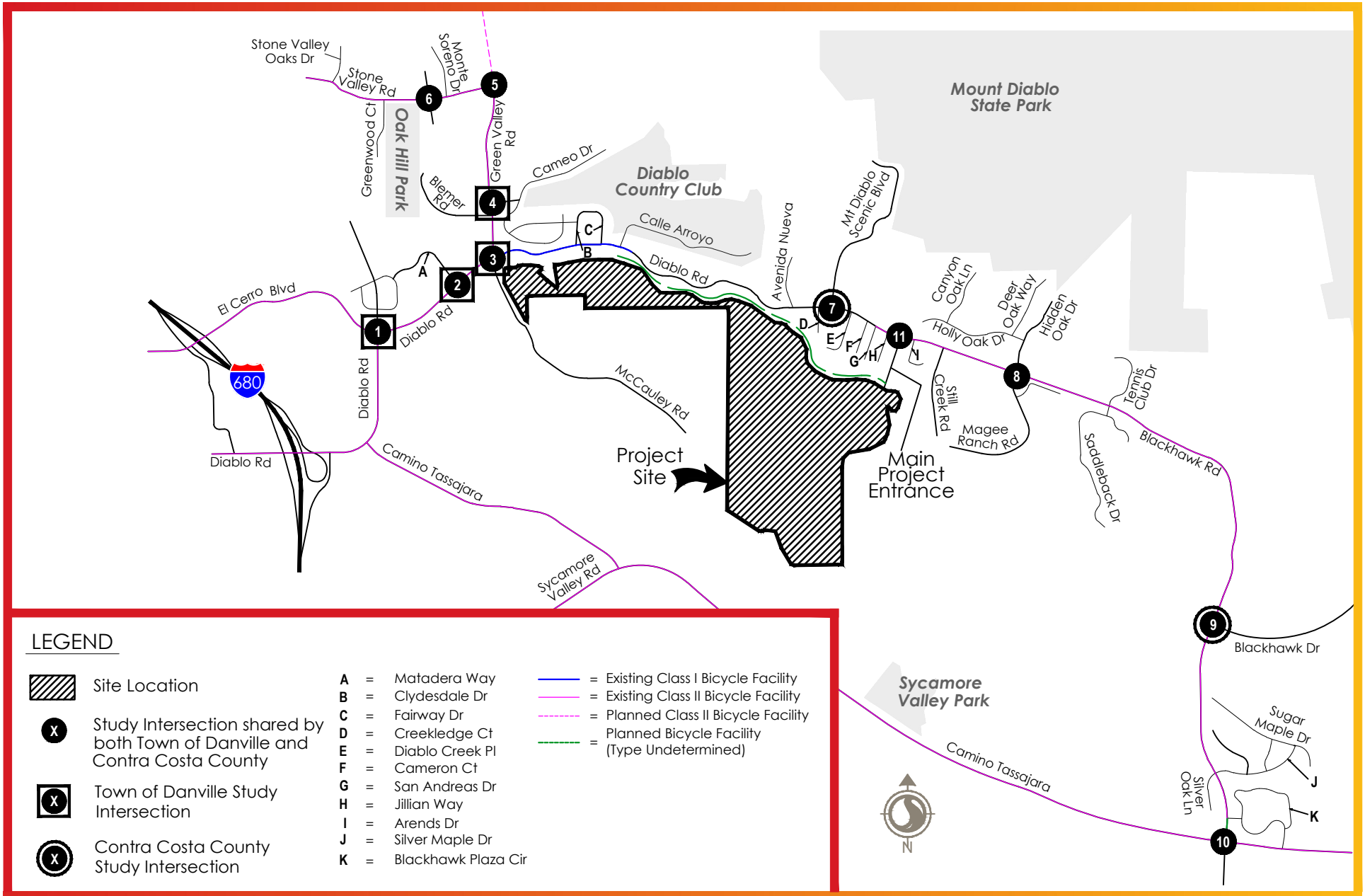
- Blackhawk Road – between Blackhawk Plaza Circle and San Andreas Drive
- Camino Tassajara – between Diablo Road and Crow Canyon Road/Blackhawk Road
- Diablo Road – between Via Hermosa and McCauley Road/Green Valley Road
- Green Valley Road – between Diablo Road and Stone Valley Road
- Stone Valley Road – between Danville Boulevard and Green Valley Road
- Sycamore Valley Road – between San Ramon Valley Boulevard and Camino Tassajara

Class II bike lanes are proposed on Green Valley Road north of Stone Valley Road per the 2017 Parks, Recreation and Arts Strategic Plan.

Existing and proposed bicycle facilities are illustrated in **Figure 3**.

PEDESTRIAN FACILITIES

Stantec also reviewed existing pedestrian conditions in the Project vicinity during the field visit on April 26, 2017. Pedestrian sidewalks are documented under the Roadway Network section. Generally, the Project vicinity is well served by pedestrian facilities for existing pedestrian activity.



Stantec

Town of Danville and Contra Costa County
Traffic Impact Study

Existing Bicycle Facilities Figure 3

EXISTING CONDITIONS

This section describes the existing intersection operating conditions and bicycle levels of service on Diablo Road.

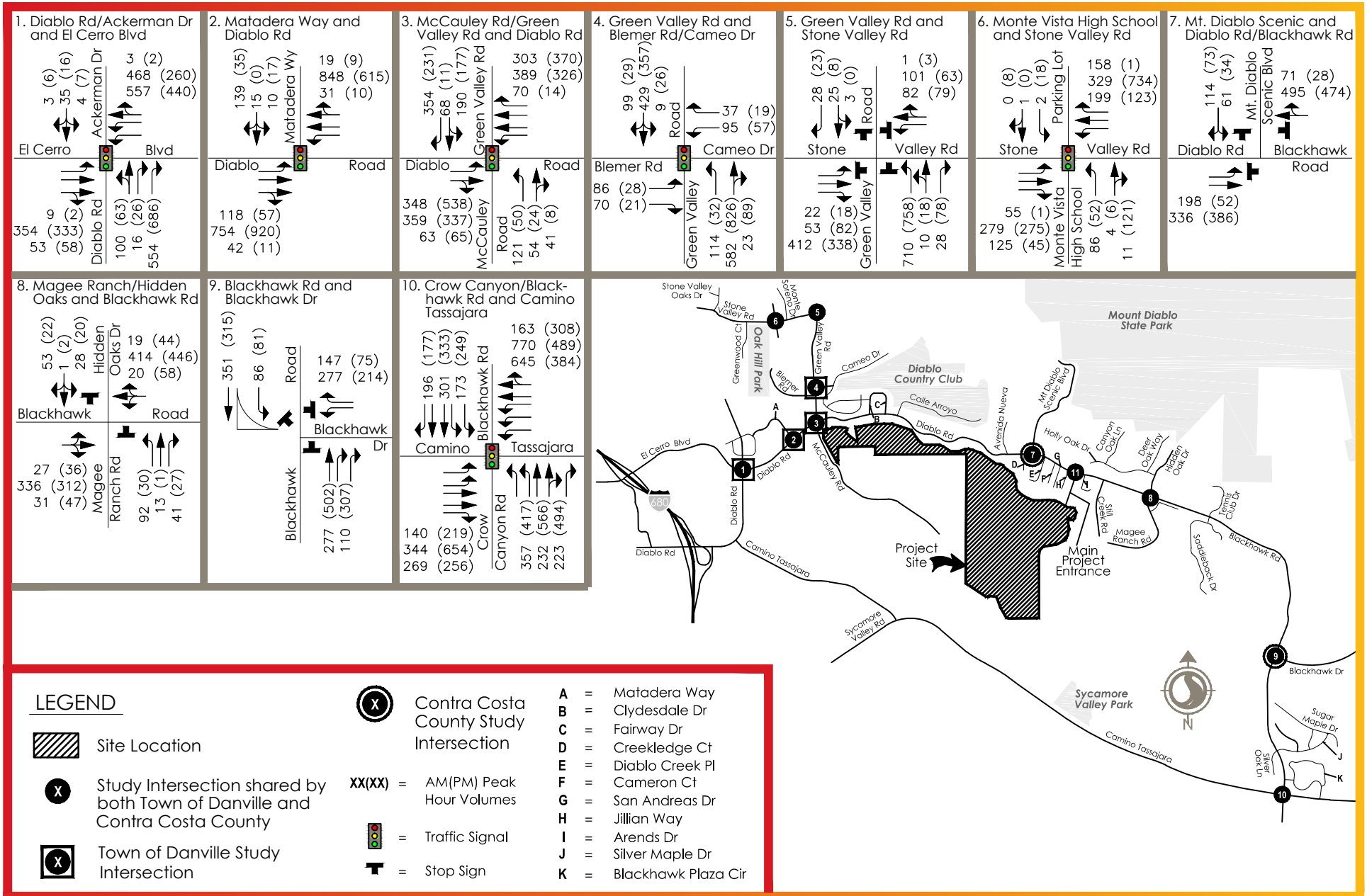
EXISTING TRAFFIC VOLUMES

Stantec collected weekday vehicle, pedestrian, and bicycle counts at all the study intersections during AM (7:00 AM – 9:00 AM), School PM (2:00 PM – 4:00 PM), and commute PM (4:00 PM – 6:00 PM) peak periods on March 30, 2017. Detailed traffic counts are included in **Appendix A**. **Figure 4** and **Figure 5** illustrate existing lane geometry, traffic controls and turning movement volumes at the study intersections.

INTERSECTION OPERATIONS – EXISTING CONDITIONS

Table 5 summarizes peak hour levels of service at the study intersections under Existing Conditions. LOS worksheets are provided in **Appendix B**. Under Existing Conditions, all study intersections are currently operating at LOS D or better except for the following:

- Intersection 4 – Blemer Road/Cameo Drive & Green Valley Road (Signal) operates with a V/C ratio > 1.0 during the AM peak hour.
- Intersection 5 – Stone Valley Road & Green Valley Road (AWSC) operates at LOS F during the AM and School PM peak hours, and LOS E during the PM peak hour.
- Intersection 7 – Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard (AWSC) operates at LOS E during the AM peak hour and LOS F during the School PM peak hour.



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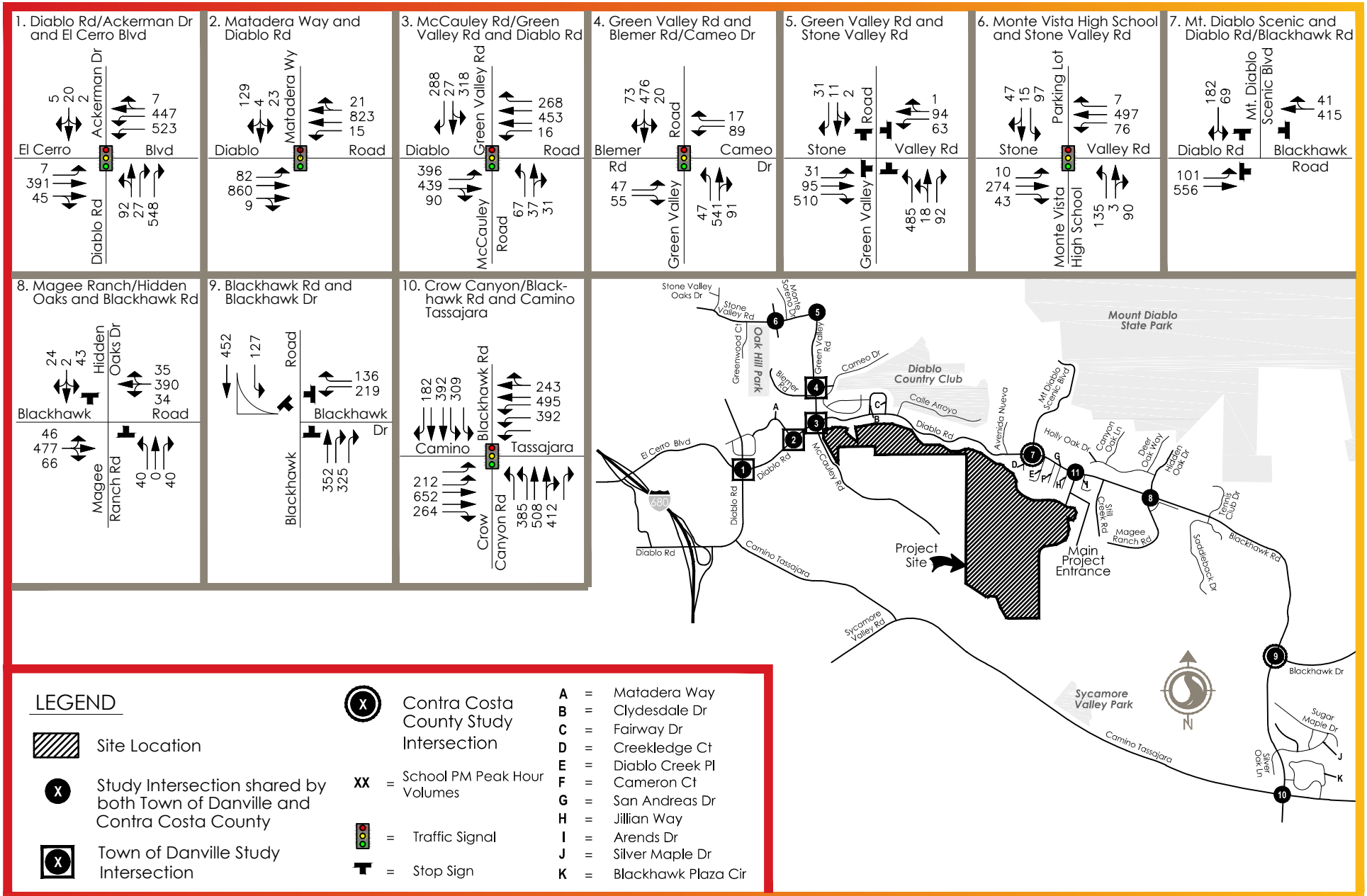
Existing Lane Configurations and AM and PM Peak Hour Traffic Volumes

Figure 4



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Existing School PM Peak Hour Traffic Volumes Figure 5

Table 5: Peak Hour Intersection LOS – Existing Conditions

ID	Intersection	Traffic Control	AM Peak			School PM Peak			PM Peak		
			Average Delay (sec)[3]	LOS[3]	V/C[4]	Average Delay (sec)[3]	LOS[3]	V/C[4]	Average Delay (sec)[3]	LOS[3]	V/C[4]
1	Diablo Rd/El Cerro Blvd & Diablo Rd/Ackerman Dr	Signal	21.4	C	0.486	18.5	B	0.404	19.0	B	0.493
2	Diablo Rd & Matadera Wy	Signal	18.4	B	0.583	13.5	B	0.497	5.8	A	0.344
3	Diablo Rd & McCauley Rd/Green Valley Rd	Signal	47.1	D	0.746	33.6	C	0.672	32.4	C	0.650
4[1]	Blemer Rd & Green Valley Rd	Signal	40.6	D	**1.097**	14.0	B	0.961	10.3	B	0.962
	Cameo Dr & Green Valley Rd		27.7	C		12.6	B		8.3	A	
5[5]	Stone Valley Rd & Green Valley Rd	AWSC	**143.0**	**F**	**1.471**	**102.4**	**F**	**1.429**	**37.1**	**E**	0.908
6	Stone Valley Rd & Monte Vista H.S. Main Drvwy	Signal	25.3	C	0.470	35.2	D	0.612	22.0	C	0.631
7[5]	Diablo Rd/Blackhawk Rd & Mt. Diablo Scenic Blvd	AWSC	**41.6**	**E**	**1.043**	**66.0**	**F**	**1.164**	22.5	C	0.807
8[5,6]	Blackhawk Rd & Magee Ranch Rd/Hidden Oak Dr	TWSC	20.1	C	0.299	22.8	C	0.228	17.1	C	0.133
9[2,5]	Blackhawk Dr & Blackhawk Rd	AWSC	18.0	C	0.700	15.4	C	0.681	24.1	C	0.892
10[1]	Camino Tassajara & Crow Canyon Rd/Blackhawk Rd	Signal	41.0	D	0.648	42.6	D	0.639	42.4	D	0.663

Notes: Delay is presented in seconds per vehicle
LOS = Level of Service
Bold indicates unacceptable operations.
[1] Intersection configuration not supported by HCM 2010 methodology. These locations are analyzed using HCM 2000.
[2] Analysis considers AWSC at the location with removal of southbound through vehicles, who have free movement at the intersection.
[3] Values reported from Synchro 9 software outputs using HCM 2010 methods, unless otherwise noted.
[4] Values reported from TRAFFIX software outputs using CCTALOS methods.
[5] Reported V/C ratios are control (worst) HCM Lane V/C Ratios, per HCM 2010 methodology.
[6] Intersection analyzed separately due to non-standard geometry using HCM 2010 TWSC analysis methodology.

Source: Stantec, 2017

WEEKDAY BICYCLE LEVEL OF SERVICE – EXISTING CONDITIONS

Analysis was conducted to determine the existing weekday level of service for bicycles on Diablo Road/Blackhawk Road between McCauley Road/Green Valley Road and Magee Ranch Road/Hidden Oak Drive. Summarized in **Table 6**, the BLOS results for Existing Conditions show acceptable levels of operation on most segments during all peak hours, except between Avenida Nueva and Diablo Creek Place in both directions during all weekday peak hours.

The deficient segment is highly impacted by the number of right-turn vehicular access points created by numerous residential driveways. The number of access points is not easily adjusted, as residents must retain access to Diablo Road/Blackhawk Road, and the best opportunity for improving bicyclist comfort and safety would be either extensive physical alteration of the existing roadway cross-section (which would require right-of-way acquisition for widening), or development of an alternate, parallel path.

Table 6: Weekday Peak Hour Segment BLOS – Existing Conditions

Roadway	From	To	Direction	AM Peak		School PM Peak		PM Peak	
				BLOS Score	BLOS	BLOS Score	BLOS	BLOS Score	BLOS
Diablo Rd	McCauley Rd/ Green Valley Rd	Calle Arroyo	EB	3.68	D	3.72	D	3.65	D
			WB	3.50	C	3.48	C	3.47	C
Diablo Rd	Calle Arroyo	Alameda Diablo	EB	3.61	D	3.68	D	3.57	D
			WB	3.68	D	3.64	D	3.64	D
Diablo Rd	Alameda Diablo	Avenida Nueva	EB	3.73	D	3.81	D	3.68	D
			WB	3.81	D	3.78	D	3.78	D
Diablo Rd/ Blackhawk Rd	Avenida Nueva	Diablo Creek Pl	EB	**4.76**	**E**	**4.82**	**E**	**4.73**	**E**
			WB	**4.84**	**E**	**4.83**	**E**	**4.82**	**E**
Blackhawk Rd[1]	Diablo Creek Pl	Magee Ranch Rd/ Hidden Oak Dr	EB	3.80	D	3.88	D	3.82	D
			WB	3.42	C	3.40	C	3.41	C

Notes: BLOS = Bicycle Level of Service; EB = Eastbound; WB = Westbound
Bold indicates unacceptable operations.
[1] Analysis performed prior to installation of bicycle lanes along study segment, however BLOS will not deteriorate with new bicycle facilities.

BICYCLE COLLISION HISTORY

Collision history for the Diablo Road/Blackhawk Road corridor was provided by Town staff from California Highway Patrol's (CHP's) Statewide Integrated Traffic Record System (SWITRS) and Danville Police Department records from January 2005 to December 2017, ensuring all reported collisions are accounted for. Additionally, it should be noted that not all collisions are reported, so the total may not include near-misses or minor collisions not recorded by a police officer. The identified bicycle collision records are included in **Appendix H**.

During the 12.5-year study period, ten (10) collisions involving bicyclists were recorded, resulting in an average bicycle collision rate of 0.8 per year.

The Diablo Road/Blackhawk Road corridor has not experienced a substantial number of bicycle-involved collisions over the past 12.5 years.

EXISTING VEHICLE TRAFFIC DEFICIENCIES

As documented in the above tables, some study intersections currently operate at unacceptable levels of service without the Project. Of the three deficient intersections, two operate with stop control and one operates with a traffic signal. The stop controlled intersections have been assessed with a Peak Hour Signal Warrant Analysis to determine if traffic signal control is warranted per the California Manual of Uniform Traffic Control Devices (CA MUTCD). The results of the analyses are as follows for Existing Conditions traffic volumes:

- Intersection 5 – Stone Valley Road & Green Valley Road
  - Peak Hour Signal Warrant satisfied during the AM, School PM and PM peak hours.
- Intersection 7 – Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard
  - Peak Hour Signal Warrant satisfied during the School PM peak hour.

Appendix I contains detailed Peak Hour Signal Warrant worksheets for the above intersections, and the results show that traffic signals are warranted at the Stone Valley Road & Green Valley Road and Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard intersections.

The Blemer Road/Cameo Drive & Green Valley Road intersection operates unacceptably due to the AM peak hour V/C ratio exceeding 1.0. To improve operations at this location, intersection capacity would need to be increased, via additional through or turning lanes. Signal timing adjustment may result in slight improvements to delay, but would not improve operations to acceptable levels of service or V/C ratio.

EXISTING PLUS PROJECT CONDITIONS

This scenario is identical to Existing Conditions, but with the addition of traffic from the proposed Magee Ranch project.

PROPOSED PROJECT LOCATION AND DESCRIPTION

The proposed Project would be located south of Diablo Road and Blackhawk Road between McCauley Road/Green Valley Road and Arends Drive in the Town of Danville. The Project would consist of 69 new single family residential homes on approximately 410 acres of vacant land.

Three units are proposed to be built with access to McCauley Road via a new driveway (Cinch Court) intersection approximately 235 feet south of Diablo Road. The remaining 66 units will have access to Blackhawk Road via a new main Project driveway (Appaloosa Street) intersection.

PLANNED INTERSECTION IMPROVEMENTS

Per information provided by Town staff, a westbound approach through lane extension is planned at the intersection of Diablo Road and McCauley Road/Green Valley Road. Under Existing Conditions, the through lanes provide approximately 60 feet of storage, and will provide approximately 310 feet with the extension.

TRIP GENERATION

Most communities use standard trip generation rates published by the Institute of Transportation Engineers (ITE), who have compiled the results of trip generation research from over 4,250 individual land use studies throughout the United States and Canada. Thus, for the most common land uses, there are standard trip generation rates that can be applied to help predict the future traffic increases that would result from a new development. The 9th edition of the Trip Generation contains trip generation rates for over 140 different land use codes, and the magnitude of traffic added to the roadway system by a particular development is estimated by multiplying the applicable trip generation rates by the size of the development.

The Town of Danville has compiled its own, more conservative, residential trip generation rates ("Danville Rates"). These rates are collected locally and more accurately reflect the predicted trip generation rates of similar residential projects in the Danville area. It should be noted that the Danville Rate reflects a trip generation rate that is a blend of residential projects, with and without second dwelling units.

Trip generation for this study has been determined using the "Danville Rate (with Second Dwelling Unit (DU))" per results of a traffic count survey of residential projects in Danville with second dwelling units (Victoria Place and Valerosa) conducted in 2012. The projects reviewed were approved at the time when the Town required a minimum of 25 percent of the properties

to include second units to satisfy the affordable housing requirements; these projects could build more than 25 percent of the properties with a second unit. The Town's current affordable housing requirements allow project to include a minimum of 10 percent of the properties with second units. A comparison of the rates is shown in **Table 7**.

Table 7: Residential Trip Rate Comparisons

Sources	Daily	Peak Hour		
		AM	School PM	PM
ITE Rates[1]	9.52	0.75	N/A	1.00
Danville Rates[2]	10.20	1.06	N/A	1.02
Danville Rates (No Second DU)[3]	8.50	N/A	0.81	N/A
Danville Rates (With Second DU)[4]	12.17	1.40	1.25	1.02

Note: Development sizes provided by Town staff.
Sources: Hexagon, 2012
[1] Single-Family Detached Housing (210), ITE Trip Generation, 9th Edition, 2012, average rates.
[2] Town of Danville observed local residential trip rates for the daily, AM and PM peak hours.
[3] Observed 3-day local residential trip rates at one similar development without second DU:
Hidden Valley on McCauley Rd – 216 SF units – Count dates: Oct. 26-28, 2010.
[4] Observed 3-day local residential trip rates at two similar developments with second DU:
Victoria Place – 24 SF units plus 5 casitas – Count dates: May 17-19, 2011.
Valerosa on Fairwood Ct – 20 SF units plus 4 casatias – Count dates: May 17-19, 2011.

Consistent with direction from Town staff to conduct a traffic analysis using the most conservative assumptions, this report applies the "Danville Rate (with Second DU)" at 12.17 daily trips to the project's daily AM, School PM and PM peak hours as shown in **Table 8**. Based on these more conservative rates, the project (with a minimum of the properties assumed to include second dwelling units) would generate 841 daily trips, including 98 AM peak hour trips (33 inbound and 65 outbound), 87 School PM peak hour trips (52 inbound and 35 outbound), and 72 PM peak hour trips (46 inbound and 26 outbound).

Table 8: Project Trip Generation

Land Use	Size	Daily		AM Peak Hour				School PM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	In	Out	Total	Rate	In	Out	Total	Rate	In	Out	Total
Single Family Homes	66 DU	12.17	804	1.4	31	62	93	1.25	50	33	83	1.02	43	25	68
	3 DU		37	1.4	2	3	5		2	2	4		3	1	4
Totals	**69 DU**		**841**		**33**	**65**	**98**		**52**	**35**	**87**		**46**	**26**	**72**

Source: Danville Rate (with Second DU); Stantec, 2017

TRIP DISTRIBUTION AND ASSIGNMENT

Stantec developed the proposed Project's trip distribution based on knowledge of the study area, traffic forecast model outputs, and input from City staff. It was observed that the AM and PM peak periods have similar traffic distributions. For the purposes of the analyses in this report, the AM and School PM peak periods are assumed to have the same distribution, and the PM

peak period has a distribution considering no trips to/from school locations. Select zone model run results used to determine the distributions are included in **Appendix F**. The trip distribution assumptions are as follows:

AM and School PM Peak Period Distributions

- 25 percent to/from Crow Canyon Road
- 25 percent to/from Stone Valley Road
- 18 percent to/from El Cerro Boulevard
- 10 percent to/from Diablo Road
- 5 percent to/from Los Cerros Middle School (Blemer Road)
- 5 percent to/from Camino Tassajara West
- 5 percent to/from Camino Tassajara East
- 5 percent to/from Monte Vista High School
- 2 percent to/from Green Valley Elementary School (Matadera Way)

PM Peak Period Distribution

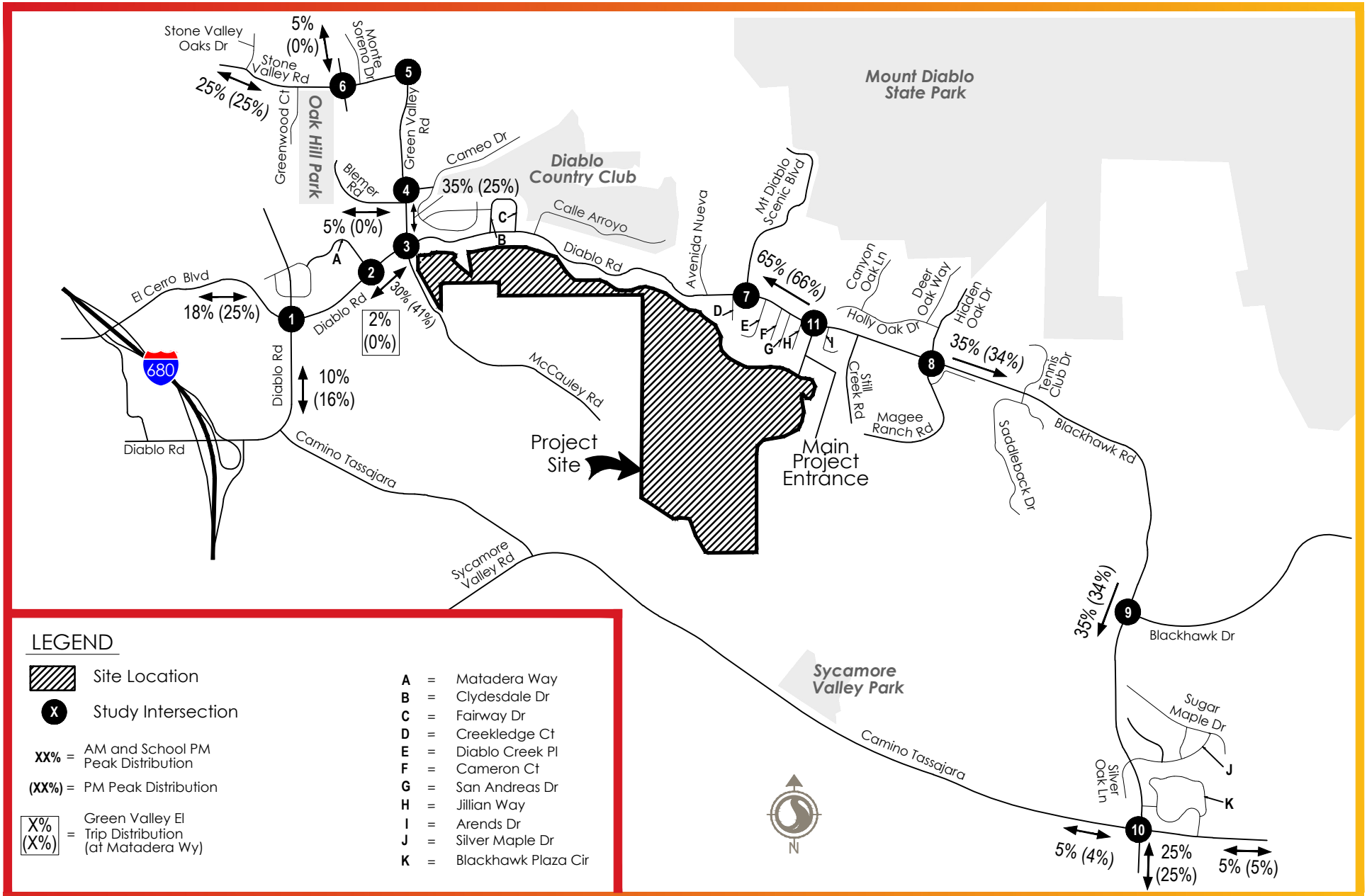
- 25 percent to/from Crow Canyon Road
- 25 percent to/from Stone Valley Road
- 25 percent to/from El Cerro Boulevard
- 16 percent to/from Diablo Road
- 5 percent to/from Camino Tassajara East
- 4 percent to/from Camino Tassajara West

Figure 6a and **Figure 6b** show the Project trips distributed to the area roadway network. **Figure 7** and **Figure 8** shows the turning movement volumes under the Existing plus Project Conditions resulting from Project trip assignment.

INTERSECTION OPERATIONS – EXISTING PLUS PROJECT CONDITIONS

Table 9 and **Table 10** summarize peak hour levels of service and V/C ratios, respectively, at the study intersections under Existing plus Project Conditions. LOS worksheets are provided in **Appendix C**. As shown, with the addition of the proposed Project trips, all study intersections currently operating acceptably are expected to continue operating at LOS D or better, with the following intersections continuing to operate unacceptably:

- Intersection 4 – Blemer Road/Cameo Drive & Green Valley Road (Signal) operates with a V/C ratio > 1.0 during the AM peak hour, as under Existing Conditions.
- Intersection 5 – Stone Valley Road & Green Valley Road (AWSC) operates at LOS F during the AM and School PM peak hours, and LOS E during the PM peak hour, as under Existing Conditions.
- Intersection 7 – Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard (AWSC) operates at LOS F during the AM and School PM peak hours.



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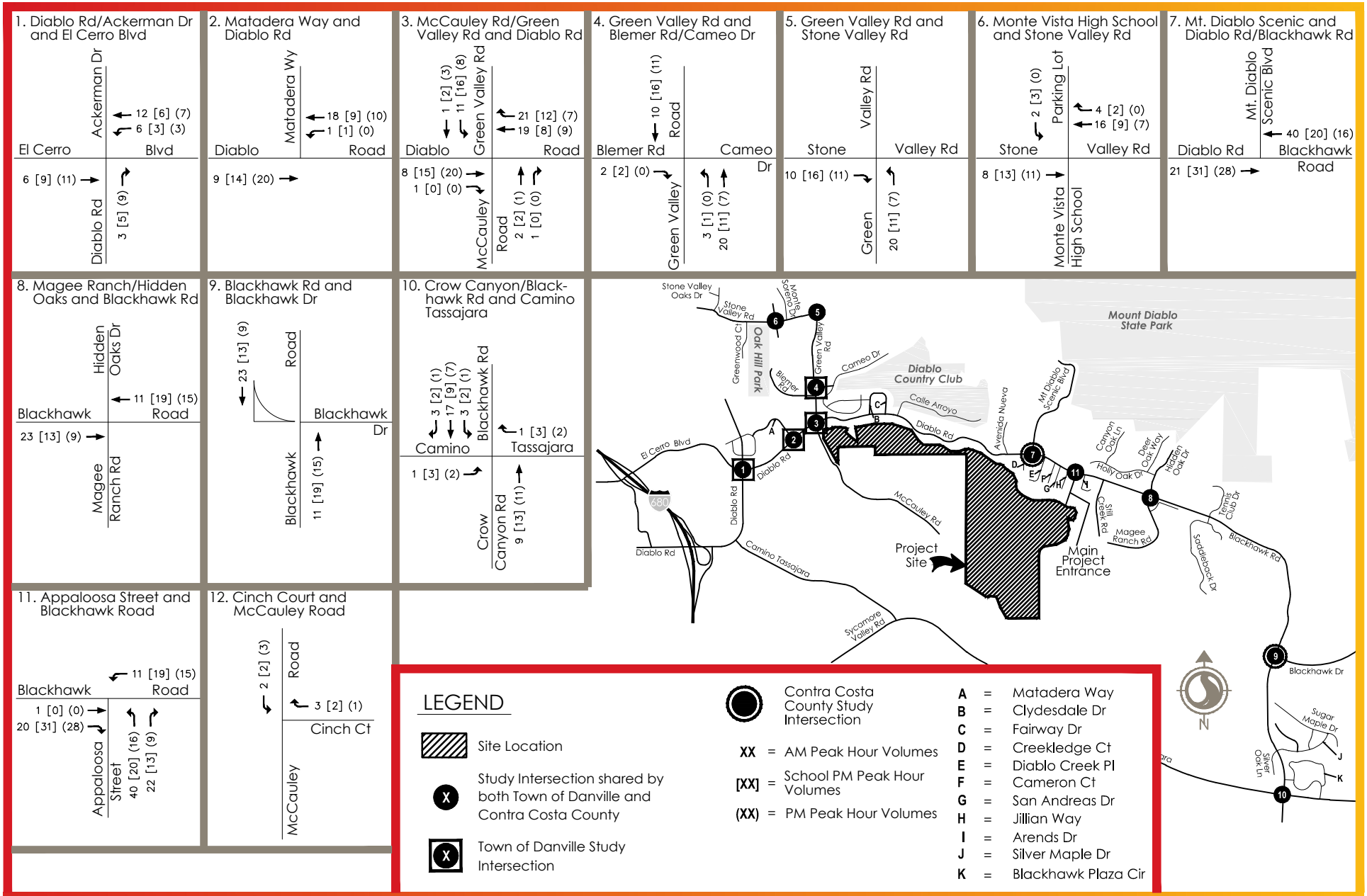
Traffic Impact Study

Project Trip Distribution Figure 6a



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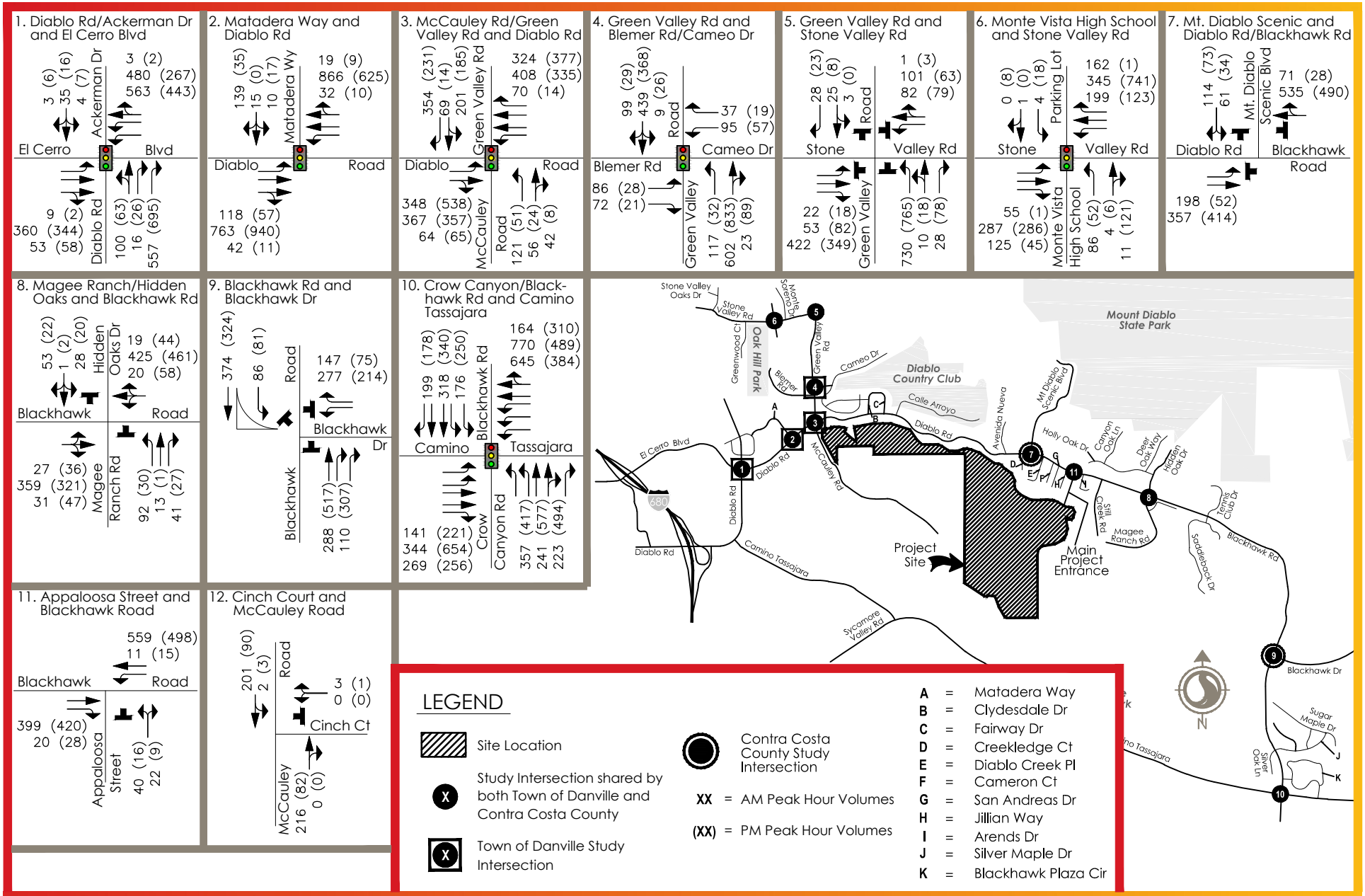
Traffic Impact Study

Project Trip Assignment Figure 6b



Town of Danville and Contra Costa County
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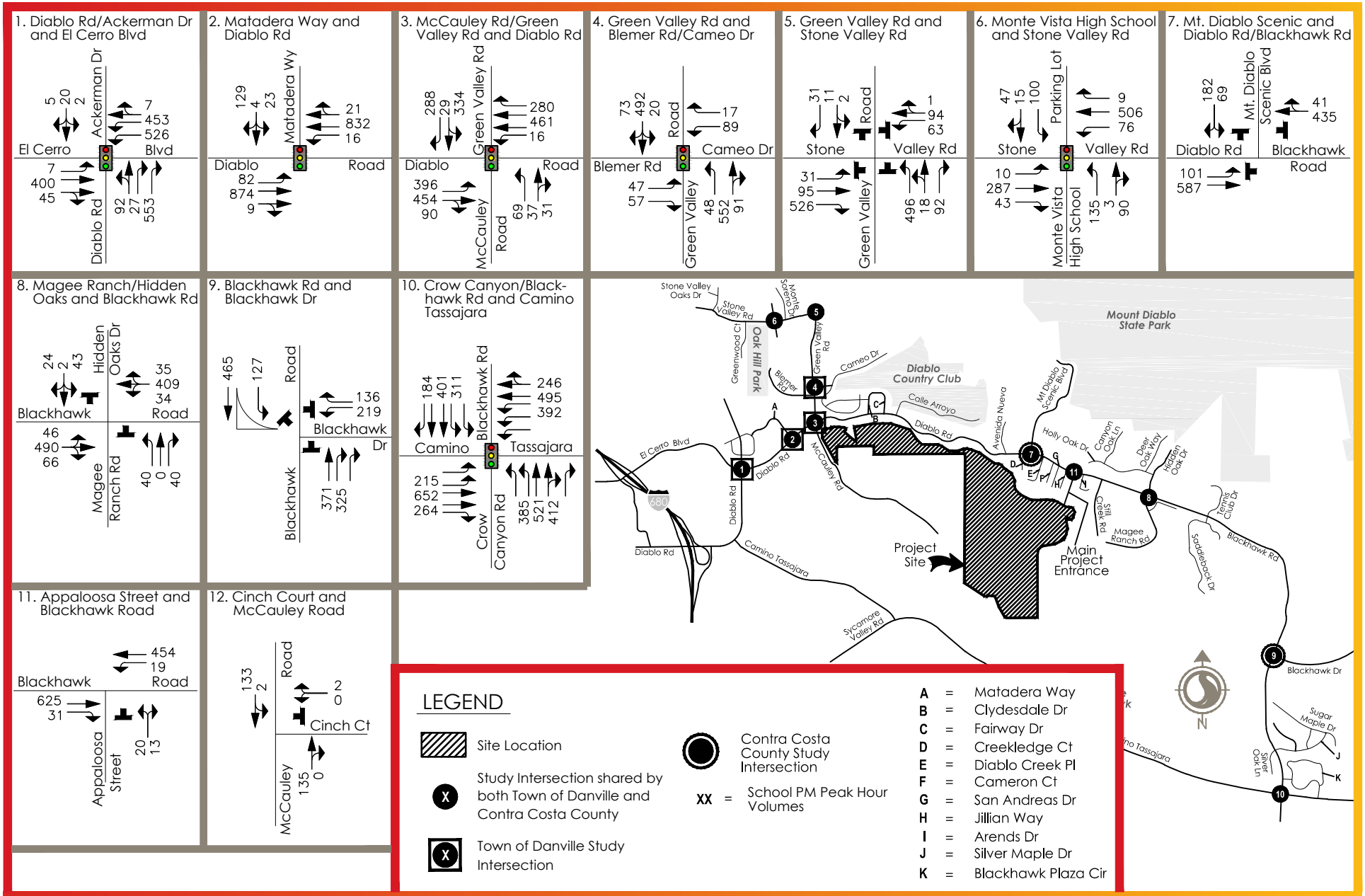
Existing plus Project Lane Configurations and AM and PM Peak Hour Traffic Volumes

Figure 7



Town of Danville and Contra Costa County
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Existing plus Project School PM Peak Hour Traffic Volumes

Figure 8

Table 9: Peak Hour Intersection LOS – Existing plus Project Conditions

ID	Intersection	Existing Conditions						Existing plus Project Conditions					
		AM Peak		School PM Peak		PM Peak		AM Peak		School PM Peak		PM Peak	
		Delay (sec)[3]	LOS[3]	Delay (sec)[3]	LOS[3]	Delay (sec)[3]	LOS[3]	Delay (sec)[3]	LOS[3]	Delay (sec)[3]	LOS[3]	Delay (sec)[3]	LOS[3]
1	Diablo Rd/El Cerro Blvd & Diablo Rd/Ackerman Dr	21.4	C	18.5	B	19.0	B	21.5	C	18.8	B	19.5	B
2	Diablo Rd & Matadera Wy	18.4	B	13.5	B	5.8	A	18.5	B	13.7	B	5.8	A
3	Diablo Rd & McCauley Rd/ Green Valley Rd	47.1	D	33.6	C	32.4	C	49.5	D	35.3	D	33.1	C
4[1]	Blemer Rd & Green Valley Rd	40.6	D	14.0	B	10.3	B	43.2	D	14.5	B	10.3	B
	Cameo Dr & Green Valley Rd	27.7	C	12.6	B	8.3	A	29.8	C	13.1	B	8.4	A
5	Stone Valley Rd & Green Valley Rd	**143.0**	**F**	**102.4**	**F**	**37.1**	**E**	**155.4**	**F**	**112.7**	**F**	**39.5**	**E**
6	Stone Valley Rd & Monte Vista H.S. Main Drvwy	25.3	C	35.2	D	22.0	C	25.7	C	36.1	D	22.2	C
7	Diablo Rd/ Blackhawk Rd & Mt. Diablo Scenic Blvd	**41.6**	**E**	**66.0**	**F**	22.5	C	**54.5**	**F**	**81.1**	**F**	25.7	D
8	Blackhawk Rd & Magee Ranch Rd/Hidden Oak Dr	20.1	C	22.8	C	17.1	C	20.6	C	23.4	C	17.4	C
9[2]	Blackhawk Dr & Blackhawk Rd	18.0	C	15.4	C	24.1	C	18.8	C	16.2	C	26.4	D
10[1]	Camino Tassajara & Crow Canyon Rd/Blackhawk Rd	41.0	D	42.6	D	42.4	D	41.6	D	42.9	D	42.6	D
11	Blackhawk Rd & Appaloosa St (Main Project Drvwy)	-	-	-	-	-	-	23.0	C	25.6	D	20.2	C
12	Cinch Ct (Project Drvwy) & McCauley Rd	-	-	-	-	-	-	9.5	A	9.0	A	8.7	A

Notes: Delay is presented in seconds per vehicle
LOS = Level of Service
Bold indicates unacceptable operations.
Underline indicates one LOS letter-grade deterioration from "no Project" to "plus Project" Conditions.
[1] Intersection configuration not supported by HCM 2010 methodology. These locations are analyzed using HCM 2000.
[2] Analysis considers AWSC at the location with removal of southbound through vehicles, who have free movement at the intersection.
[3] Values reported from Synchro 9 software outputs using HCM 2010 methods, unless otherwise noted.

Source: Stantec, 2017

Table 10: Peak Hour V/C Ratio – Existing plus Project Conditions

ID	Intersection	Existing Conditions			Existing plus Project Conditions					
		AM Peak	School PM Peak	PM Peak	AM Peak		School PM Peak		PM Peak	
		V/C Ratio[3]			V/C Ratio[3]	%Diff.[4]	V/C Ratio[3]	%Diff.[4]	V/C Ratio[3]	%Diff.[4]
1	Diablo Rd/El Cerro Blvd & Diablo Rd/ Ackerman Dr	0.486	0.404	0.493	0.494	1.63%	0.408	0.99%	0.500	1.41%
2	Diablo Rd & Matadera Wy	0.583	0.497	0.344	0.589	1.02%	0.500	0.60%	0.351	2.01%
3	Diablo Rd & McCauley Rd/ Green Valley Rd	0.746	0.672	0.650	0.762	2.12%	0.696	3.51%	0.657	1.07%
4[1]	Blemer Rd & Green Valley Rd Cameo Dr & Green Valley Rd	**1.097**	0.961	0.962	**1.113**	1.45%	0.981	2.06%	0.974	1.24%
5	Stone Valley Rd & Green Valley Rd	**1.471**	**1.429**	0.908	**1.515**	2.95%	**1.471**	2.90%	0.926	1.96%
6	Stone Valley Rd & Monte Vista H.S. Main Drvwy	0.470	0.612	0.631	0.476	1.27%	0.623	1.78%	0.635	0.63%
7	Diablo Rd/ Blackhawk Rd & Mt. Diablo Scenic Blvd	**1.043**	**1.164**	0.807	**1.124**	7.48%	**1.235**	5.92%	0.840	4.01%
8	Blackhawk Rd & Magee Ranch Rd/Hidden Oak Dr	0.299	0.228	0.133	0.305	1.99%	0.234	2.60%	0.136	2.23%
9	Blackhawk Dr & Blackhawk Rd	0.700	0.681	0.892	0.725	3.51%	0.718	5.29%	0.917	2.76%
10[2]	Camino Tassajara & Crow Canyon Rd/Blackhawk Rd	0.648	0.639	0.663	0.655	1.07%	0.642	0.47%	0.667	0.60%
11	Blackhawk Rd & Appaloosa St (Main Project Drvwy)	-	-	-	0.179	-	0.111	-	0.068	-
12	Cinch Ct (Project Drvwy) & McCauley Rd	-	-	-	0.004	-	0.002	-	0.002	-

Notes: **Bold** indicates unacceptable V/C ratio.
Underline indicates V/C ratio increase greater than 5 percent.
[1] Intersection configuration not supported by HCM 2010 methodology. These locations are analyzed using HCM 2000.
[2] Analysis considers AWSC at the location with removal of southbound through vehicles, who have free movement at the intersection.
[3] Values reported from TRAFFIX software outputs using CCTALOS methods. Values reported from TRAFFIX software outputs using CCTALOS methods.
[4] %Diff. represents difference in V/C Ratio between "no Project" and "plus Project" Conditions.

Source: Stantec, 2017

WEEKDAY BICYCLE LEVEL OF SERVICE – EXISTING PLUS PROJECT CONDITIONS

Table 11 summarizes weekday BLOS analysis results under Existing plus Project Conditions. With the Project, the Diablo Road/Blackhawk Road corridor is expected to continue operating at acceptable BLOS D or better on most segments during all peak hours, except between Avenida Nueva and Diablo Creek Place in both directions during all weekday peak hours (as under Existing Conditions).

As noted under Existing Conditions, the deficient segment is mainly impacted by the right-turn access-point density generated by existing residential driveways, which is a critical variable in BLOS calculation using HCM 2010 methodology. Consistent with enhancing bicyclist comfort and safety in the vicinity, the Project will provide a trail system parallel to the deficient segment available to the bicyclist community that could improve bicyclist comfort through this segment of the study corridor.

Table 11: Weekday Peak Hour Segment BLOS – Existing plus Project Conditions

Roadway	From	To	Direction	AM Peak			School PM Peak			PM Peak		
				BLOS Score	BLOS	%Diff.	BLOS Score	BLOS	%Diff.	BLOS Score	BLOS	%Diff.
Diablo Rd	McCauley Rd/ Green Valley Rd	Calle Arroyo	EB	3.69	D	0.27%	3.73	D	0.27%	3.66	D	0.27%
			WB	3.50	C	0.00%	3.48	C	0.00%	3.48	C	0.29%
Diablo Rd	Calle Arroyo	Alameda Diablo	EB	3.62	D	0.28%	3.70	D	0.54%	3.58	D	0.28%
			WB	3.70	D	0.54%	3.65	D	0.27%	3.64	D	0.00%
Diablo Rd	Alameda Diablo	Avenida Nueva	EB	3.74	D	0.27%	3.82	D	0.26%	3.70	D	0.54%
			WB	3.82	D	0.26%	3.79	D	0.26%	3.79	D	0.26%
Diablo Rd/ Blackhawk Rd	Avenida Nueva	Diablo Creek Pl	EB	**4.77**	**E**	0.21%	**4.83**	**E**	0.21%	**4.74**	**E**	0.21%
			WB	**4.85**	**E**	0.21%	**4.84**	**E**	0.21%	**4.82**	**E**	0.00%
Blackhawk Rd[1]	Diablo Creek Pl	Magee Ranch Rd/ Hidden Oak Dr	EB	3.81	D	0.26%	3.88	D	0.00%	3.82	D	0.00%
			WB	3.42	C	0.00%	3.40	C	0.00%	3.41	C	0.00%

Notes: BLOS = Bicycle Level of Service; EB = Eastbound; WB = Westbound
Bold indicates unacceptable operations.
Underline indicates one LOS letter-grade deterioration from "no Project" to "plus Project" Conditions.
%Diff. represents difference in BLOS Score between "no Project" and "plus Project" Conditions.
[1] Analysis performed prior to installation of bicycle lanes along study segment, however BLOS will not deteriorate with new bicycle facilities.

SIGNIFICANT IMPACTS AND MITIGATIONS

No study intersections are projected to degrade from acceptable LOS D or better conditions to unacceptable LOS E or worse conditions because of the Project. Per the Town's significance criteria, the following intersection experiences a significant impact due to an increase in V/C ratio greater than 5 percent:

- Intersection 7 – Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard (AWSC)
  - Increase in V/C ratio greater than 5 percent during the AM and School PM peak hours.

The Blemer Road/Cameo Drive & Green Valley Road and Stone Valley Road & Green Valley Road intersections are currently operating unacceptably, and these locations are not significantly impacted because of Project traffic as change in V/C ratio is less than 5 percent.

The significantly impacted intersection was assessed through a Peak Hour Signal Warrant Analysis to determine if traffic signal control is warranted per CA MUTCD. The results of the analysis are as follows under Existing plus Project Conditions traffic volumes:

- Intersection 7 – Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard
  - Peak Hour Signal Warrant satisfied during the AM and School PM peak hours.

Appendix I contains detailed Peak Hour Signal Warrant worksheets for the unsignalized intersection. The addition of Project traffic does not cause any unsignalized intersection to require a traffic signal where it was not warranted under Existing Conditions.

Installation of a traffic signal at the Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard intersection would improve operations to acceptable levels of service during the significantly impacted peak hours.

Additionally, the project sponsor is advised to work with the TRAFFIX school bus program to include a new stop on Route GV8/GV9, LC8/LC9, and MV10 for the proposed development. Project trips associated with school drop-off and pick-up are expected to reduce with students utilizing the school bus program.

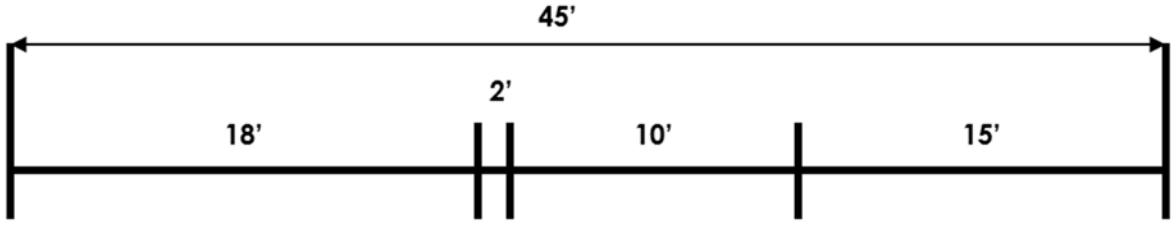
PROJECT SITE ACCESS AND CIRCULATION

Stantec reviewed the Project site plan to evaluate on-site circulation and access per the site plan prepared by RJA, dated July 24, 2017. The site plan shows that new Project driveway intersections are proposed on Blackhawk Road and McCauley Road.

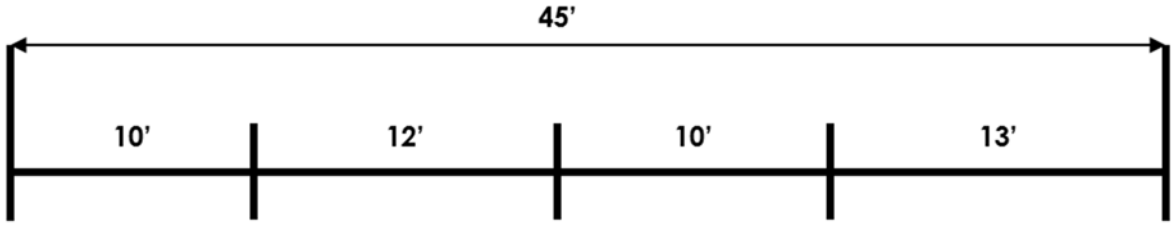
The main Project driveway, Appaloosa Street, located on Blackhawk Road would provide access to 66 residential homes. It would consist of one 20-foot inbound lane and two 11-foot outbound lanes (exclusive left- and right-turn pockets) with 20-foot landscaped median and minor-street Stop Control. Additionally, a crosswalk is proposed on the west leg of the intersection to facilitate north-south pedestrian crossing movements, and *supplemental flashing*

beacon treatment is recommended to enhance the crossing. Sight distance along Blackhawk Road appears to be adequate and poses no issues to safety. LOS analysis for this intersection is included in **Table 9** and **Table 15** for the "plus Project" scenarios.

The Project driveway, Cinch Court, located on McCauley Road (approximately 235 feet south of Diablo Road) would provide access to the remaining three residential homes. It would consist of one 12-foot inbound lane and one 12-foot outbound lane with minor-street Stop Control. Sight distance along McCauley Road appears adequate and poses no issues to safety. Queuing from northbound vehicles at the intersection of Diablo Road & McCauley Road/Green Valley Road could impact proposed driveway operations as vehicles making left-turns into the driveway would have to cross two lanes of oncoming traffic, but northbound left-turn queues at Diablo Road & McCauley Road/Green Valley Road are not expected to spill back into the northbound through lanes. LOS analysis for this intersection is included in **Table 9** and **Table 15** for the "plus Project" scenarios. *Roadway striping along McCauley Road is recommended to be modified from Diablo Road to approximately 350 feet thereof*. The modified striping would include the reconfiguring the existing cross-section that provides an 18-foot southbound lane, 2-foot center median,10-foot northbound turn lane and 15-foot northbound lane to provide a 10-foot southbound shoulder, 12-foot southbound lane, 10-foot northbound turn lane and 13-foot northbound lane. The existing and recommended cross-sections for McCauley Road are illustrated below.



Existing McCauley Road Cross-Section



Proposed McCauley Road Cross-Section

The site plan shows proposed landscaping near the Appaloosa Street driveway location to close the current access to Jillian Way, which should be no greater than 3 feet in height. The access points should be free and clear of any obstructions to optimize sight distance. Clear sight visibility helps ensure exiting vehicles can see pedestrians, bicyclists, and other vehicles travelling on the main roadway (Blackhawk Road or McCauley Road). Landscaping and parking should not

conflict with a driver's ability to locate a gap in traffic. Prior to final design, adequate corner sight distance should be provided at the site access points in accordance with Caltrans standards and reviewed by the Town.

PROJECT ON-SITE PARKING

Stantec examined the Town municipal code to determine whether the Project meets Town parking requirements given the proposed land uses and current Town zoning. Per the Town of Danville Municipal Code – Chapter 32 (Planning and Land Use) Section 22 (Single Family Residential Districts) Sub-Section 13 (Off-Street Parking), the Project is required to provide a minimum of two off-street parking spaces per lot. Per the Code, "The spaces shall be provided in an enclosed garage structure that meets the setback requirements of each district." **Table 12** illustrates the Project off-street parking requirements and proposed on-site parking supply.

Table 12: Project Parking Requirements and Supply

Land Use	Size	Town Requirements		Proposed Project Supply			Differential
		Code	Required	Covered	Uncovered	Total	
Single Family Residence	69 du	2 covered off-street spaces per lot	138	138	69	207	+ 69

Source: Town of Danville Municipal Code, Chapter XXXII Planning and Land Use, 2017

Per the current Project site plan, the proposed Project would provide 207 off-street parking spaces (one driveway and two garage spaces per unit) in addition to on-street parking. As shown in the table, the Project provides at least 69 parking spaces in excess of the Town's requirement.

Also per the site plan, on-street parking is proposed on most new streets in the development. Two new roads are not planned to provide on-street parking on both sides: Appaloosa Street and Cinch Court. Appaloosa Street serves as the main Project entrance and will experience the highest amount of vehicle traffic for the development. Cinch Court does provide limited on-street parking (four parallel spaces) for the three adjacent units.

CUMULATIVE CONDITIONS

CUMULATIVE CONDITIONS TRAFFIC FORECASTS

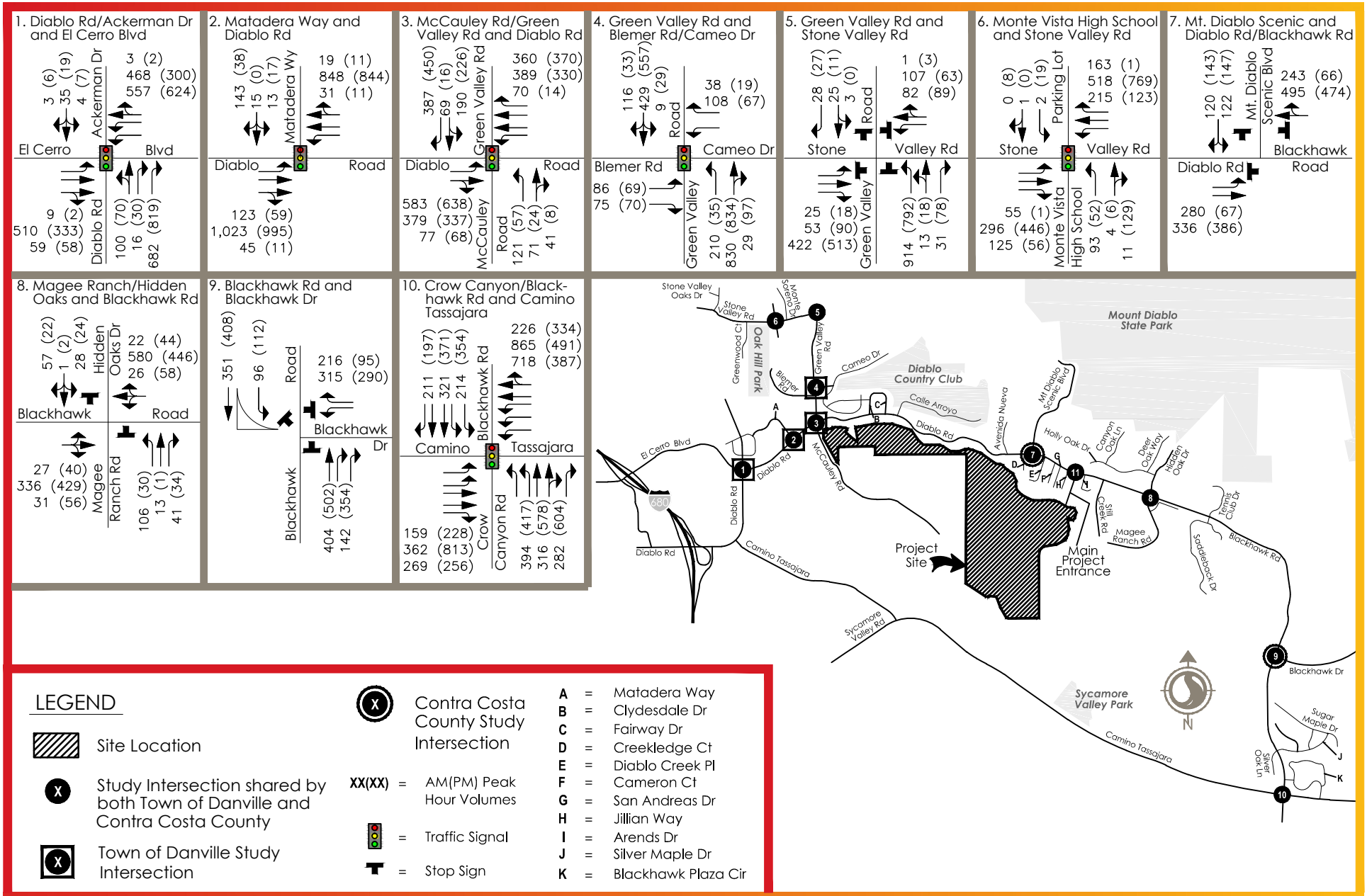
Stantec conducted the Cumulative Conditions traffic forecasts by utilizing the latest countywide Decennial Model. Stantec calculated the difference between 2010 and 2040 model link volumes to estimate a 30-year growth increment. This increment was interpolated to estimate a 23-year growth between 2017 and 2040. The growth was then added to the existing turning movement volumes proportionately based on the existing turning movement distribution pattern at each study intersection to calculate Cumulative turning movements. **Figure 9** and **Figure 10** show the resulting Cumulative Conditions turning movement volumes.

INTERSECTION OPERATIONS – CUMULATIVE CONDITIONS

Table 13 shows the intersection peak hour levels of service at the study intersections under Cumulative Conditions. LOS worksheets are provided in **Appendix D**.

As shown, under Cumulative Conditions, three intersections are projected to operate unacceptably during all three peak hours, one intersection is projected to operate unacceptably during two peak hours, and two intersections are projected to operate unacceptably during one peak hour. The following intersections are expected to operate at LOS E or LOS F under Cumulative Conditions:

- Intersection 3 – Diablo Road & McCauley Road/Green Valley Road (Signal) is expected to operate at LOS E during the AM peak hour.
- Intersection 4 – Blemer Road/Cameo Drive & Green Valley Road (Signal) is expected to operate with a V/C ratio greater than 1.0 during the AM and PM peak hours.
- Intersection 5 – Stone Valley Road & Green Valley Road (AWSC) is expected to operate at LOS F during all three peak hours.
- Intersection 7 – Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard (AWSC) is expected to operate at LOS F during the AM and School PM peak hours and LOS E during the PM peak hour.
- Intersection 8 – Blackhawk Road & Magee Ranch Road/Hidden Oak Drive (TWSC) is expected to operate at LOS E during the AM peak hour.
- Intersection 9 – Blackhawk Drive & Blackhawk Road (AWSC) is expected to operate at LOS F during all three peak hours.



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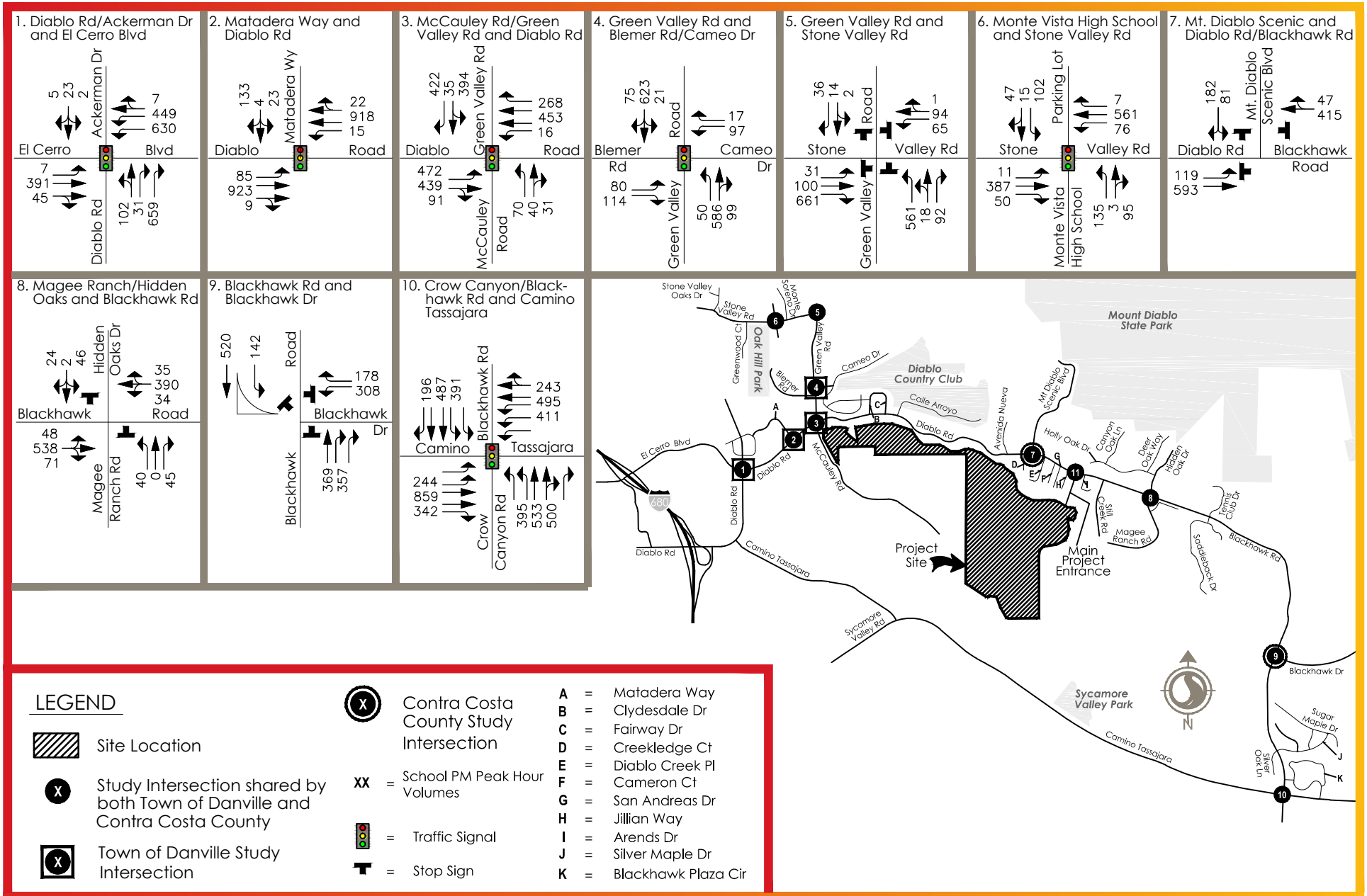
Traffic Impact Study

Cumulative Lane Configurations and AM and PM Peak Hour Traffic Volumes

Figure 9



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Traffic Impact Study

Cumulative School PM Peak Hour Traffic Volumes

Figure 10

Table 13: Peak Hour Intersection LOS – Cumulative Conditions

ID	Intersection	Traffic Control	AM Peak			School PM Peak			PM Peak		
			Average Delay (sec)[3]	LOS[3]	V/C[4]	Average Delay (sec)[3]	LOS[3]	V/C[4]	Average Delay (sec)[3]	LOS[3]	V/C[4]
1	Diablo Rd/El Cerro Blvd & Diablo Rd/Ackerman Dr	Signal	50.5	D	0.632	20.2	C	0.509	22.8	C	0.577
2	Diablo Rd & Matadera Wy	Signal	19.3	B	0.611	14.1	B	0.534	6.4	A	0.371
3	Diablo Rd & McCauley Rd/Green Valley Rd	Signal	**62.3**	**E**	0.936	44.1	D	0.839	34.5	C	0.758
4[1]	Blemer Rd & Green Valley Rd	Signal	**57.5**	**E**	**1.323**	24.6	C	0.777	17.2	B	**1.158**
	Cameo Dr & Green Valley Rd		48.7	D		17.9	B		12.8	B	
5[5]	Stone Valley Rd & Green Valley Rd	AWSC	**224.5**	**F**	**1.669**	**212.2**	**F**	**1.924**	**87.4**	**F**	**1.266**
6	Stone Valley Rd & Monte Vista H.S. Main Drvwy	Signal	31.7	C	0.559	51.3	D	0.672	24.4	C	0.663
7[5]	Diablo Rd/Blackhawk Rd & Mt. Diablo Scenic Blvd	AWSC	**109.8**	**F**	**1.431**	**82.1**	**F**	**1.250**	**43.5**	**E**	**1.020**
8[5]	Blackhawk Rd & Magee Ranch Rd/Hidden Oak Dr	TWSC	**37.0**	**E**	0.518	27.6	D	0.288	18.2	C	0.088
9[2,5]	Blackhawk Dr & Blackhawk Rd	AWSC	**87.7**	**F**	**1.317**	**111.0**	**F**	**1.518**	**83.4**	**F**	**1.248**
10[1]	Camino Tassajara & Crow Canyon Rd/Blackhawk Rd	Signal	43.9	D	0.737	53.4	D	0.765	71.2	E	0.751

Notes: Delay is presented in seconds per vehicle
LOS = Level of Service
Bold indicates unacceptable operations.
[1] Intersection configuration not supported by HCM 2010 methodology. These locations are analyzed using HCM 2000.
[2] Analysis considers AWSC at the location with removal of southbound through vehicles, who have free movement at the intersection.
[3] Values reported from Synchro 9 software outputs using HCM 2010 methods, unless otherwise noted.
[4] Values reported from TRAFFIX software outputs using CCTALOS methods.
[5] Reported V/C ratios are control (worst) HCM Lane V/C Ratios, per HCM 2010 methodology.
Source: Stantec, 2017

WEEKDAY BICYCLE LEVEL OF SERVICE – CUMULATIVE CONDITIONS

Table 14 summarizes weekday BLOS analysis results under Cumulative Conditions. Considering anticipated traffic growth, the Diablo Road/Blackhawk Road corridor is expected to operate at acceptable BLOS D or better on most segments during all peak hours, except between Avenida Nueva and Diablo Creek Place in both directions during all peak hours.

As under Existing Conditions, the deficient segment is mainly impacted by the number of right-turn vehicular access points created by numerous residential driveways. The number of access points is not easily adjusted, as residents must retain access to Diablo Road/Blackhawk Road, and the best opportunity for improving bicyclist comfort and safety would be either extensive physical alteration of the existing roadway cross-section (which would require right-of-way acquisition for widening), or development of an alternate, parallel path.

Table 14: Weekday Peak Hour Segment BLOS – Cumulative Conditions

Roadway	From	To	Direction	AM Peak		School PM Peak		PM Peak	
				BLOS Score	BLOS	BLOS Score	BLOS	BLOS Score	BLOS
Diablo Rd	McCauley Rd/ Green Valley Rd	Calle Arroyo	EB	3.70	D	3.74	D	3.66	D
			WB	3.50	C	3.48	C	3.48	C
Diablo Rd	Calle Arroyo	Alameda Diablo	EB	3.63	D	3.71	D	3.58	D
			WB	3.70	D	3.66	D	3.66	D
Diablo Rd	Alameda Diablo	Avenida Nueva	EB	3.75	D	3.83	D	3.70	D
			WB	3.83	D	3.80	D	3.79	D
Diablo Rd/ Blackhawk Rd	Avenida Nueva	Diablo Creek Pl	EB	**4.78**	**E**	**4.84**	**E**	**4.74**	**E**
			WB	**4.85**	**E**	**4.84**	**E**	**4.83**	**E**
Blackhawk Rd[1]	Diablo Creek Pl	Magee Ranch Rd/ Hidden Oak Dr	EB	3.81	D	3.89	D	3.83	D
			WB	3.43	C	3.41	C	3.49	C

Notes: BLOS = Bicycle Level of Service; EB = Eastbound; WB = Westbound
Bold indicates unacceptable operations.
[1] Analysis performed prior to installation of bicycle lanes along study segment, however BLOS will not deteriorate with new bicycle facilities.

PROJECTED DEFICIENCIES

As documented in the above tables, some study intersections are expected to operate at unacceptable levels of service without the Project. Of the six deficient intersections, four operate with stop control and two operate with a traffic signal. The four stop controlled intersections have been assessed with a Peak Hour Signal Warrant Analysis to determine if traffic signal control is warranted per CA MUTCD. The results of the analyses are as follows for Cumulative Conditions traffic volumes:

- Intersection 5 – Stone Valley Road & Green Valley Road
  - Peak Hour Signal Warrant satisfied during the AM, School PM and PM peak hours.
- Intersection 7 – Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard
  - Peak Hour Signal Warrant satisfied during the AM, School PM and PM peak hours.
- Intersection 8 – Blackhawk Road & Magee Ranch Road/Hidden Oak Drive
  - Peak Hour Signal Warrant satisfied during the AM peak hour.
- Intersection 9 – Blackhawk Drive & Blackhawk Road
  - Peak Hour Signal Warrant satisfied during the School PM peak hour.

Appendix I contains detailed Peak Hour Signal Warrant worksheets for the above intersections, and results show that traffic signals are warranted at all intersections deficient under Cumulative Conditions.

The Diablo Road & McCauley Road/Green Valley Road intersection is expected to operate at unacceptable LOS E during the AM peak hour. The Town has improvements planned at this study intersection to lengthen the westbound approach lanes, and the improvements are incorporated in the analysis model. In addition to the planned improvements, modifications to the northbound and southbound lane geometries would be necessary to improve operations at the intersection to acceptable LOS D during the AM peak hour. The northbound approach would need an additional left-turn pocket, and the southbound approach would need to provide a left-turn pocket, through lane and right turn trap lane. Adjustments to the southbound approach would require widening of Green Valley Road to provide a second lane between Diablo Road and Blemer Road.

The Blemer Road/Cameo Drive & Green Valley Road intersection operates unacceptably due to the AM and PM peak hour V/C ratios exceeding 1.0. To improve operations at this location, intersection capacity would need to be increased via additional through or turning lanes. Signal timing adjustment may result in slight improvements to delay, but would not improve operations to acceptable levels of service or V/C ratio.

CUMULATIVE PLUS PROJECT CONDITIONS

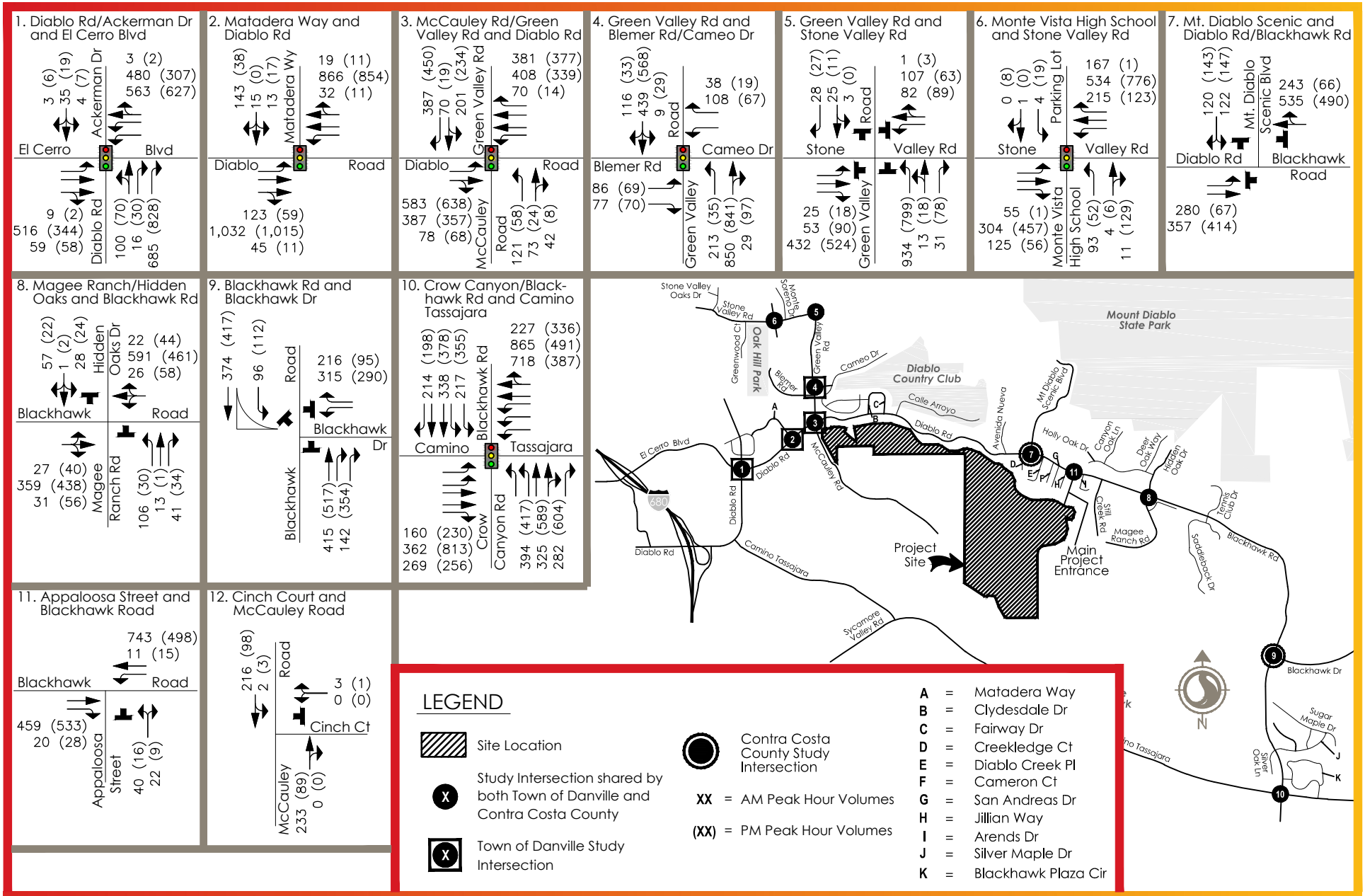
This scenario is identical to Cumulative Conditions, but with the addition of traffic from the proposed Magee Ranch project. **Figure 11** and **Figure 12** shows the resulting intersection volumes under the Cumulative plus Project Conditions.

INTERSECTION OPERATIONS – CUMULATIVE PLUS PROJECT CONDITIONS

Table 15 and **Table 16** show intersection peak hour levels of service and V/C ratios, respectively, at the study intersections under Cumulative plus Project Conditions. LOS worksheets are provided in **Appendix E**.

As shown, under Cumulative plus Project Conditions, three intersections are projected to operate unacceptably during all three peak hours, one intersection is projected to operate unacceptably during two peak hours, and two intersections are projected to operate unacceptably during one peak hour. The following intersections are expected to operate at LOS E or LOS F under Cumulative plus Project Conditions:

- Intersection 3 – Diablo Road & McCauley Road/Green Valley Road (Signal) is expected to operate at LOS E during the AM peak hour, as under Cumulative Conditions.
- Intersection 4 – Blemer Road/Cameo Drive & Green Valley Road (Signal) is expected to operate with a V/C ratio greater than 1.0 during the AM and PM peak hours, as under Cumulative Conditions.
- Intersection 5 – Stone Valley Road & Green Valley Road (AWSC) is expected to operate at LOS F during all three peak hours, as under Cumulative Conditions.
- Intersection 7 – Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard (AWSC) is expected to operate at LOS F during all three peak hours.
- Intersection 8 – Blackhawk Road & Magee Ranch Road/Hidden Oak Drive (TWSC) is expected to operate at LOS E during the AM Peak Hour, as under Cumulative Conditions.
- Intersection 9 – Blackhawk Drive & Blackhawk Road (AWSC) is expected to operate at LOS F during all three peak hours, as under Cumulative Conditions.



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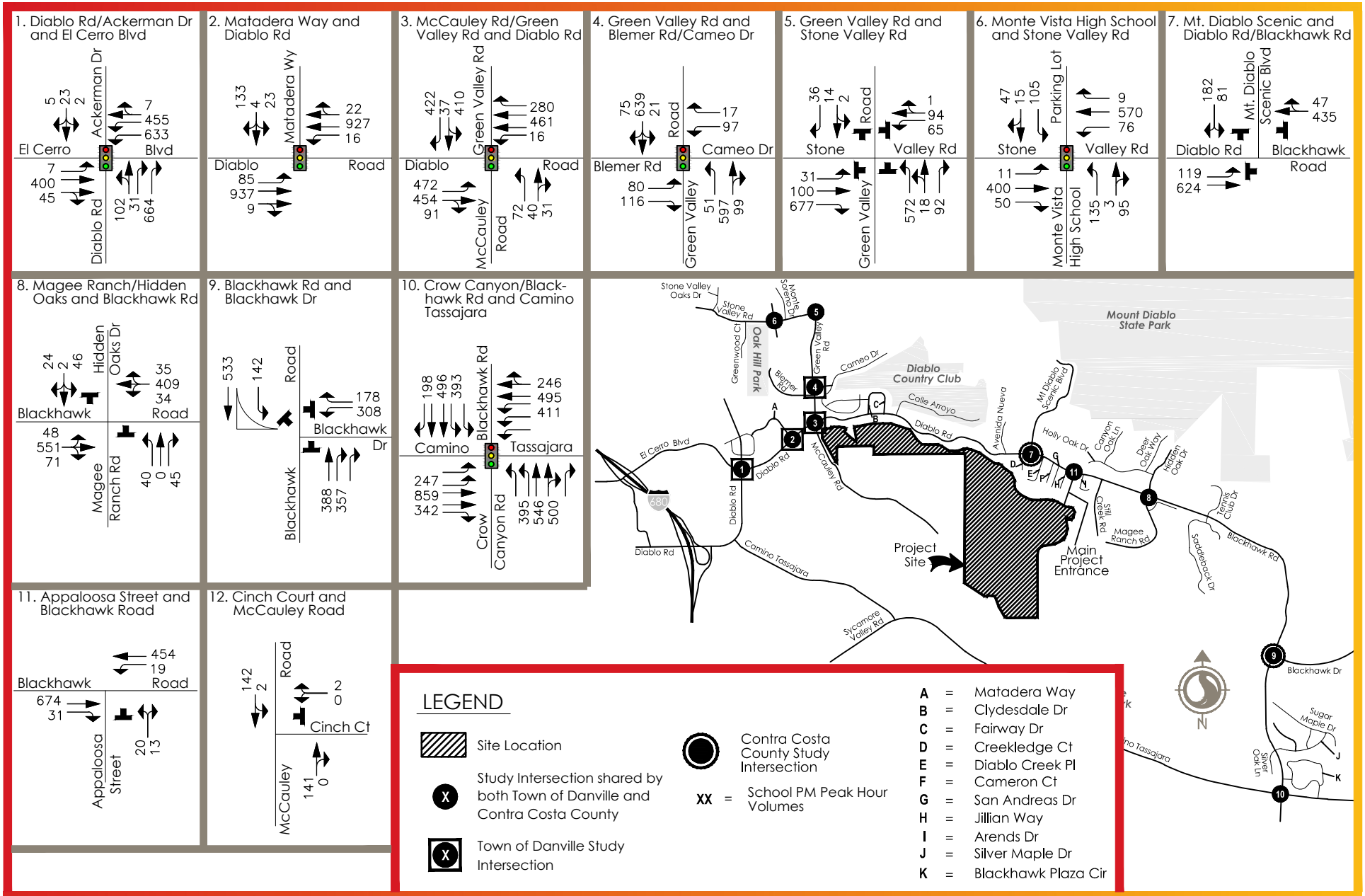
Cumulative plus Project Lane Configurations and AM and PM Peak Hour Traffic Volumes

Figure 11



Town of Danville and Contra Costa County
Traffic Impact Study

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Cumulative plus Project School PM Peak Hour Traffic Volumes

Figure 12

Table 15: Peak Hour Intersection LOS – Cumulative plus Project Conditions

ID	Intersection	Cumulative Conditions						Cumulative plus Project Conditions					
		AM Peak		School PM Peak		PM Peak		AM Peak		School PM Peak		PM Peak	
		Delay (sec)[3]	LOS[3]	Delay (sec)[3]	LOS[3]	Delay (sec)[3]	LOS[3]	Delay (sec)[3]	LOS[3]	Delay (sec)[3]	LOS[3]	Delay (sec)[3]	LOS[3]
1	Diablo Rd/El Cerro Blvd & Diablo Rd/ Ackerman Dr	50.5	D	20.2	C	22.8	C	52.3	D	20.5	C	23.5	C
2	Diablo Rd & Matadera Wy	19.3	B	14.1	B	6.4	A	19.6	B	14.4	B	6.5	A
3	Diablo Rd & McCauley Rd/ Green Valley Rd	**62.3**	**E**	44.1	D	34.5	C	**67.5**	**E**	46.2	D	35.1	D
4[1]	Blemer Rd & Green Valley Rd	**57.5**	**E**	24.6	C	17.2	B	**58.8**	**E**	25.6	C	17.3	B
	Cameo Dr & Green Valley Rd	**48.7**	**D**	17.9	B	12.8	B	**75.3**	**E**	18.7	B	13.3	B
5	Stone Valley Rd & Green Valley Rd	**224.5**	**F**	**212.2**	**F**	**87.4**	**F**	**237.5**	**F**	**225.1**	**F**	**90.7**	**F**
6	Stone Valley Rd & Monte Vista H.S. Main Drvwy	31.7	C	51.3	D	24.4	C	32.9	C	53.9	D	24.7	C
7	Diablo Rd/ Blackhawk Rd & Mt. Diablo Scenic Blvd	**109.8**	**F**	**82.1**	**F**	**43.5**	**E**	**128.0**	**F**	**98.5**	**F**	**51.6**	**F**
8	Blackhawk Rd & Magee Ranch Rd/Hidden Oak Dr	**37.0**	**E**	27.6	D	18.2	C	**38.7**	**E**	28.7	D	18.5	C
9[2]	Blackhawk Dr & Blackhawk Rd	**87.7**	**F**	**111.0**	**F**	**83.4**	**F**	**99.3**	**F**	**121.3**	**F**	**89.4**	**F**
10[1]	Camino Tassajara & Crow Canyon Rd/Blackhawk Rd	43.9	D	53.4	D	71.2	E	44.4	D	53.9	D	71.9	E
11	Blackhawk Rd & Appaloosa St (Main Project Drvwy)	-	-	-	-	-	-	33.8	D	27.4	D	23.3	C
12	Cinch Ct (Project Drvwy) & McCauley Rd	-	-	-	-	-	-	9.6	A	9.0	A	8.8	A

Notes: Delay is presented in seconds per vehicle
LOS = Level of Service
Bold indicates unacceptable operations.
Underline indicates one LOS letter-grade deterioration from "no Project" to "plus Project" Conditions.
[1] Intersection configuration not supported by HCM 2010 methodology. These locations are analyzed using HCM 2000.
[2] Analysis considers AWSC at the location with removal of southbound through vehicles, who have free movement at the intersection.
[3] Values reported from Synchro 9 software outputs using HCM 2010 methods, unless otherwise noted.

Source: Stantec, 2017

Table 16: Peak Hour V/C Ratio – Cumulative plus Project Conditions

ID	Intersection	Cumulative Conditions			Cumulative plus Project Conditions					
		AM Peak	School PM Peak	PM Peak	AM Peak		School PM Peak		PM Peak	
		V/C Ratio[3]			V/C Ratio[3]	%Diff.[4]	V/C Ratio[3]	%Diff.[4]	V/C Ratio[3]	%Diff.[4]
1	Diablo Rd/El Cerro Blvd & Diablo Rd/ Ackerman Dr	0.632	0.509	0.577	0.637	0.79%	0.515	1.17%	0.585	1.38%
2	Diablo Rd & Matadera Wy	0.611	0.534	0.371	0.615	0.65%	0.537	0.56%	0.378	1.87%
3	Diablo Rd & McCauley Rd/ Green Valley Rd	0.936	0.839	0.758	0.952	1.69%	0.856	2.01%	0.770	1.57%
4[1]	Blemer Rd & Green Valley Rd Cameo Dr & Green Valley Rd	**1.323**	0.777	**1.158**	**1.347**	1.80%	0.792	1.91%	**1.170**	1.03%
5	Stone Valley Rd & Green Valley Rd	**1.669**	**1.924**	**1.266**	**1.695**	1.55%	**1.962**	1.96%	**1.297**	2.42%
6	Stone Valley Rd & Monte Vista H.S. Main Drvwy	0.559	0.672	0.663	0.572	2.30%	0.683	1.62%	0.668	0.75%
7	Diablo Rd/ Blackhawk Rd & Mt. Diablo Scenic Blvd	**1.431**	**1.250**	**1.020**	**1.516**	5.77%	**1.335**	6.58%	**1.052**	3.09%
8	Blackhawk Rd & Magee Ranch Rd/Hidden Oak Dr	0.518	0.288	0.088	0.532	2.67%	0.297	3.08%	0.089	1.13%
9[2]	Blackhawk Dr & Blackhawk Rd	**1.317**	**1.518**	**1.248**	**1.368**	3.80%	**1.585**	4.32%	**1.283**	2.77%
10[1]	Camino Tassajara & Crow Canyon Rd/Blackhawk Rd	0.737	0.765	0.751	0.744	0.95%	0.769	0.52%	0.754	0.40%
11	Blackhawk Rd & Appaloosa St (Main Project Drvwy)	-	-	-	0.259	-	0.119	-	0.081	-
12	Cinch Ct (Project Drvwy) & McCauley Rd	-	-	-	0.004	-	0.002	-	0.002	-

Notes: **Bold** indicates unacceptable V/C ratio.
Underline indicates increase in V/C ratio greater than 5 percent; significant project impact.
[1] Intersection configuration not supported by HCM 2010 methodology. These locations are analyzed using HCM 2000.
[2] Analysis considers AWSC at the location with removal of southbound through vehicles, who have free movement at the intersection.
[3] Values reported from TRAFFIX software outputs using CCTALOS methods. Values reported from TRAFFIX software outputs using CCTALOS methods.
[4] %Diff. represents percent difference in V/C Ratio between "no Project" and "plus Project" Conditions; basis for significant impact determination.
Source: Stantec, 2017

WEEKDAY BICYCLE LEVEL OF SERVICE – CUMULATIVE PLUS PROJECT CONDITIONS

Table 17 summarizes weekday BLOS analysis results under Cumulative plus Project Conditions. With the Project, the Diablo Road/ Blackhawk Road corridor is expected to continue operating at acceptable BLOS D or better on most segments during all peak hours, except between Avenida Nueva and Diablo Creek Place in both directions during all weekday peak hours.

As noted under Cumulative Conditions, the deficient segment is mainly impacted by the right-turn access-point density generated by existing residential driveways. Consistent with enhancing bicyclist comfort and safety in the vicinity, the Project will provide a trail system parallel to the deficient segment available to the bicyclist community that could improve bicyclist comfort through this segment of the study corridor.

Table 17: Weekday Peak Hour Segment BLOS – Cumulative plus Project Conditions

Roadway	From	To	Direction	AM Peak			School PM Peak			PM Peak		
				BLOS Score	BLOS	%Diff.	BLOS Score	BLOS	%Diff.	BLOS Score	BLOS	%Diff.
Diablo Rd	McCauley Rd/ Green Valley Rd	Calle Arroyo	EB	3.70	D	0.00%	3.75	D	0.27%	3.67	D	0.27%
			WB	3.51	D	0.29%	3.49	C	0.29%	3.48	C	0.00%
Diablo Rd	Calle Arroyo	Alameda Diablo	EB	3.64	D	0.28%	3.72	D	0.27%	3.60	D	0.56%
			WB	3.72	D	0.54%	3.68	D	0.54%	3.67	D	0.27%
Diablo Rd	Alameda Diablo	Avenida Nueva	EB	3.76	D	0.27%	3.85	D	0.52%	3.71	D	0.27%
			WB	3.84	D	0.26%	3.80	D	0.00%	3.80	D	0.26%
Diablo Rd/ Blackhawk Rd	Avenida Nueva	Diablo Creek Pl	EB	**4.79**	**E**	0.21%	**4.85**	**E**	0.21%	**4.75**	**E**	0.21%
			WB	**4.86**	**E**	0.21%	**4.85**	**E**	0.21%	**4.84**	**E**	0.21%
Blackhawk Rd[1]	Diablo Creek Pl	Magee Ranch Rd/ Hidden Oak Dr	EB	3.82	D	0.26%	3.90	D	0.26%	3.83	D	0.00%
			WB	3.43	C	0.00%	3.41	C	0.00%	3.49	C	0.00%

Notes: BLOS = Bicycle Level of Service; EB = Eastbound; WB = Westbound
Bold indicates unacceptable operations.
Underline indicates one LOS letter-grade deterioration from "no Project" to "plus Project" Conditions.
%Diff. represents difference in BLOS Score between "no Project" and "plus Project" Conditions.
[1] Analysis performed prior to installation of bicycle lanes along study segment, however BLOS will not deteriorate with new bicycle facilities.

SIGNIFICANT IMPACTS AND MITIGATIONS

No study intersections are projected to degrade from acceptable LOS D or better conditions to unacceptable LOS E or worse conditions because of the Project. Per the Town's significance criteria, the following intersection experiences a significant impact due to an increase in V/C ratio greater than 5 percent:

- Intersection 7 – Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard (AWSC)
  - Increase in V/C ratio greater than 5 percent during the AM and School PM peak hours.

The Blemer Road/Cameo Drive & Green Valley Road, Stone Valley Road & Green Valley Road and Blackhawk Drive & Blackhawk Road intersections are expected to operate unacceptably without the Project, and these locations are not significantly impacted because of Project traffic as change in V/C ratio is less than 5 percent.

As under Cumulative Conditions, traffic signals are warranted at the four, deficient stop-controlled intersections under Cumulative plus Project Conditions per CA MUTCD. **Appendix I** contains detailed Peak Hour Signal Warrant worksheets for the unsignalized intersections. The addition of Project traffic does not cause any unsignalized intersection to require a traffic signal where it was not warranted under "no Project" Conditions.

Installation of traffic signals is expected to improve operations to LOS B or better under Cumulative plus Project Conditions during all peak hours at each deficient location, as shown in the following summary tables. LOS worksheets for these intersections with installation of a traffic signal are included in **Appendix E**.

Significant impacts projected to occur at Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard would be satisfactorily mitigated with the project sponsor paying a fair-share of the traffic signal design and installation. The project sponsor is not responsible for improvements needed at Stone Valley Road & Green Valley Road, Blackhawk Road & Magee Ranch Road/Hidden Oak Drive, or Blackhawk Drive & Blackhawk Road.

Intersection 5 – Stone Valley Road & Green Valley Road

Cumulative Conditions (No Signal)			Cumulative plus Project Conditions (With Signal)		
Delay	LOS	V/C	Delay	LOS	V/C
AM Peak Hour					
224.5	F	1.669	17.7	B	-
School PM Peak Hour					
212.2	F	1.924	11.7	B	-
PM Peak Hour					
87.4	F	1.266	10.9	B	-

Intersection 7 – Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard

Cumulative Conditions (No Signal)			Cumulative plus Project Conditions (With Signal)		
Delay	**LOS**	**V/C**	**Delay**	**LOS**	**V/C**
AM Peak Hour					
109.8	F	1.431	15.3	B	-
School PM Peak Hour					
82.1	F	1.250	5.7	A	-
PM Peak Hour					
43.5	E	1.020	13.5	B	-

Intersection 8 – Blackhawk Road & Magee Ranch Road/Hidden Oak Drive

Cumulative Conditions (No Signal)			Cumulative plus Project Conditions (With Signal)		
Delay	**LOS**	**V/C**	**Delay**	**LOS**	**V/C**
AM Peak Hour					
37.0	E	0.518	6.8	A	-
School PM Peak Hour					
27.6	D	0.288	6.3	A	-
PM Peak Hour					
18.2	C	0.088	5.9	A	-

Intersection 9 – Blackhawk Drive & Blackhawk Road

Cumulative Conditions (No Signal)			Cumulative plus Project Conditions (With Signal)		
Delay	**LOS**	**V/C**	**Delay**	**LOS**	**V/C**
AM Peak Hour					
87.7	F	1.317	10.3	B	-
School PM Peak Hour					
111.0	F	1.518	9.4	A	-
PM Peak Hour					
83.4	F	1.248	8.7	A	-

Additionally, the project sponsor is advised to work with the TRAFFIX school bus program to include a new stop on Route GV8/GV9, LC8/LC9, and MV10 for the proposed development. Project trips associated with school drop-off and pick-up are expected to reduce with students utilizing the school bus program.

WEEKEND BICYCLE LEVEL OF SERVICE ANALYSIS

Weekend bicycle activity was identified as a major concern for the bicycling community in Danville due to increased ridership on weekends compared to weekdays. For purposes of the weekend BLOS analysis contained in this section, vehicle and bicycle volumes are taken from a typical Saturday during the "bicycle peak" (i.e., the time with highest bicycle activity, regardless of vehicular traffic volumes).

To determine Project-related impacts, a weekend trip generation rate was determined based on the existing housing development located south of Blackhawk Road at Magee Ranch Road. The Town provided a total number homes in the development (259 units), which was compared with the weekend peak hour volumes at the intersection of Blackhawk Road & Magee Ranch Road/Hidden Oak Drive. The comparison yielded a trip generation rate per unit for a typical Saturday, which is then applied to the proposed 69 residential units. **Table 18** summarizes the anticipated weekend trip generation.

Table 18: Weekend Vehicle Trip Generation for Saturday BLOS Analysis

Land Use	Size	Saturday Bicycle Peak Hour			
		Rate	In	Out	Total
Single Family Homes	69 DU	0.48	14	19	33

Source: Stantec, 2017

The vehicle trips summarized above are distributed to the roadway system considering the trip distribution assumptions made for the PM peak period (see **Figure 6a**) to illustrate how the Project is anticipated to affect BLOS on weekends. **Table 19** summarizes Saturday BLOS analysis results under Existing and Existing plus Project Conditions, and **Table 20** summarizes Saturday BLOS analysis results under Cumulative and Cumulative plus Project Conditions.

As evidenced in the tables, the Diablo Road/Blackhawk Road corridor is expected to operate at acceptable BLOS D or better on most segments during all peak hours, except between Avenida Nueva and Diablo Creek Place in both directions under all scenarios. As identified previously, the deficient segment is mainly impacted by the high, right-turn access-point density resultant of existing residential driveways. Consistent with enhancing bicyclist comfort and safety in the vicinity, the Project will provide a trail system parallel to the deficient segment available to the bicyclist community that could improve bicyclist comfort through this segment of the study corridor.

The addition of Project traffic on weekends is not expected to cause a significant negative impact to BLOS under any study scenario.

Table 19: Weekend Peak Hour Segment BLOS – Existing and Existing plus Project Conditions

Roadway	From	To	Direction	Existing Conditions		Existing plus Project Conditions		%Diff.
				BLOS Score	BLOS	BLOS Score	BLOS	
Diablo Rd	McCauley Rd/ Green Valley Rd	Calle Arroyo	EB	3.63	D	3.63	D	0.00%
			WB	3.45	C	3.45	C	0.00%
Diablo Rd	Calle Arroyo	Alameda Diablo	EB	3.53	D	3.53	D	0.00%
			WB	3.53	D	3.53	D	0.00%
Diablo Rd	Alameda Diablo	Avenida Nueva	EB	3.64	D	3.65	D	0.27%
			WB	3.69	D	3.70	D	0.27%
Diablo Rd/ Blackhawk Rd	Avenida Nueva	Diablo Creek Pl	EB	**4.69**	**E**	**4.69**	**E**	0.00%
			WB	**4.76**	**E**	**4.76**	**E**	0.00%
Blackhawk Rd[1]	Diablo Creek Pl	Magee Ranch Rd/ Hidden Oak Dr	EB	3.77	D	3.77	D	0.00%
			WB	3.36	C	3.37	C	0.30%

Notes: BLOS = Bicycle Level of Service; EB = Eastbound; WB = Westbound
Bold indicates unacceptable operations.
%Diff. represents difference in BLOS Score between "no Project" and "plus Project" Conditions.
[1] Analysis performed prior to installation of bicycle lanes along study segment, however BLOS will not deteriorate with new bicycle facilities.

Table 20: Weekend Peak Hour Segment BLOS – Cumulative and Cumulative plus Project Conditions

Roadway	From	To	Direction	Cumulative Conditions		Cumulative plus Project Conditions		%Diff.
				BLOS Score	BLOS	BLOS Score	BLOS	
Diablo Rd	McCauley Rd/ Green Valley Rd	Calle Arroyo	EB	3.63	D	3.64	D	0.28%
			WB	3.46	C	3.46	C	0.00%
Diablo Rd	Calle Arroyo	Alameda Diablo	EB	3.54	D	3.54	D	0.00%
			WB	3.54	D	3.55	D	0.28%
Diablo Rd	Alameda Diablo	Avenida Nueva	EB	3.65	D	3.66	D	0.27%
			WB	3.70	D	3.71	D	0.27%
Diablo Rd/ Blackhawk Rd	Avenida Nueva	Diablo Creek Pl	EB	4.70	E	4.70	E	0.00%
			WB	4.77	E	4.77	E	0.00%
Blackhawk Rd[1]	Diablo Creek Pl	Magee Ranch Rd/ Hidden Oak Dr	EB	3.77	D	3.78	D	0.26%
			WB	3.37	C	3.38	C	0.30%

Notes: BLOS = Bicycle Level of Service; EB = Eastbound; WB = Westbound
Bold indicates unacceptable operations.
%Diff. represents difference in BLOS Score between "no Project" and "plus Project" Conditions.
[1] Analysis performed prior to installation of bicycle lanes along study segment, however BLOS will not deteriorate with new bicycle facilities.

TRAFFIC OPERATIONS ANALYSIS

The traffic operations analysis is based on vehicle queuing for high-demand movements at the intersection of Diablo Road & McCauley Road/Green Valley Road. Vehicle queues were estimated using Synchro 9 software, which estimates the 95th percentile maximum number of queued vehicles per signal cycle for a particular movement. This analysis provides a basis for estimating future storage requirements at intersections under the assumption that all signal timings are optimized under Cumulative Conditions. The vehicle queuing estimates as compared with existing available storage are provided in **Table 21**.

Table 21: Vehicle Queuing and Storage Capacity at Diablo Road & McCauley Road/Green Valley Road Intersection

Scenario	NBL (330-foot Storage)			SBT/L (290-foot Storage)			WBR (310-foot Storage)		
	AM Peak	School PM Peak	PM Peak	AM Peak	School PM Peak	PM Peak	AM Peak	School PM Peak	PM Peak
Existing Conditions	207	84	93	**390**	**505**	237	137	46	88
Existing plus Project Conditions	210	86	96	**415**	**542**	253	162	47	87
Cumulative Conditions	<u>162</u>	91	<u>88</u>	**431**	**581**	**328**	270	66	91
Cumulative plus Project Conditions	162	92	89	**458**	**616**	**348**	301	68	92

Notes: Queue and Storage measurements reported in feet from Synchro 9 software.
Bold indicates 95th percentile queue reported exceeds existing storage.
<u>Underline</u> indicates a reduction in 95th percentile queue length resultant of signal timing optimization for Cumulative Conditions analysis.

DIABLO ROAD & MCCAULEY ROAD/GREEN VALLEY ROAD – NORTHBOUND LEFT-TURN

Under Existing Conditions, there is approximately 330 feet of storage capacity for the northbound left-turn lane at the intersection of Diablo Road & McCauley Road/Green Valley Road. The storage capacity is measured as the distance between the intersection crosswalk and the taper of the left-turn pocket. Beyond this, vehicles would queue south into the through lane. Under no scenario is the northbound left-turn lane projected to exceed provided storage, and under no scenario would the northbound queue extend to the Project driveway, Cinch Court.

DIABLO ROAD & MCCAULEY ROAD/GREEN VALLEY ROAD – SOUTHBOUND SHARED THROUGH/LEFT-TURN

Under Existing Conditions, there is approximately 290 feet of storage capacity for the southbound shared through/left-turn lane at the intersection. The storage capacity is measured

as the distance between the intersection crosswalk and the taper of the adjacent right-turn lane. Beyond this, vehicles can queue north of the taper up to the signalized cross-street of Blemer Road. The queue for this movement is projected to exceed the existing storage in all scenarios except for during the PM peak hour of Existing Conditions and Existing plus Project Conditions. It was observed that the vehicle queues for this movement are heavy under Existing Conditions, and frequently spill-back beyond Leonard Court. The Project would add approximately one or two vehicles per signal cycle to the 95th percentile queue during each peak hour.

While the southbound shared through/left-turn movement at the intersection of Diablo Road would not accommodate the 95th percentile queue under most conditions, the project contribution to this queue would be only one or two vehicles per signal cycle. By definition, the 95th percentile queue only occurs one out of every 20 traffic signal cycles, and the 95th percentile queue only occurs for a very brief period at the end of the signal cycle.

Signal timing and coordination could help improve the already deficient operations for this movement and would require an additional engineering study.

DIABLO ROAD & MCCAULEY ROAD/GREEN VALLEY ROAD – WESTBOUND RIGHT-TURN

Under Existing Conditions, there is approximately 310 feet of storage capacity for the westbound right-turn lane at the intersection of Diablo Road & McCauley Road/Green Valley Road. The storage capacity is measured as the distance between the intersection crosswalk and the taper of the right-turn pocket. Beyond this, vehicles would queue east into the through lane. Under no scenario is the westbound right-turn lane projected to exceed provided storage.

CONCLUSIONS AND RECOMMENDATIONS

Stantec has reached the following conclusions regarding the proposed Magee Ranches Project located south of Diablo Road and Blackhawk Road between Green Valley/McCauley Road and Arends Drive in the Town of Danville:

- The proposed Project is expected to generate approximately 98 net new AM peak hour trips (33 inbound and 65 outbound), 87 net new School PM peak hour trips (52 inbound and 35 outbound), and 72 net new PM peak hour trips (46 inbound and 26 outbound).
- Currently, seven of ten study intersections operate at LOS D or better during all peak hours.
- Bicycle level of service analysis results show the Diablo Road/Blackhawk Road corridor is deficient on the following segments under Existing Conditions:
  - Between Avenida Nueva and Diablo Creek Place in both directions during all peak hours, including weekend peak.
- Under Existing plus Project Conditions, all study intersections are expected to continue operating at LOS D or better during all peak hours except those already operating unacceptably under Existing Conditions. The following intersections experience a significant impact because of the Project:
  - <u>Intersection 7 – Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard</u>
    - V/C ratio increases more than 5 percent during the AM and School PM peak hours.
      - Peak Hour Signal Warrant **satisfied** during the AM and School PM peak hours.
- With addition of the Project, bicycle level of service is anticipated to remain unchanged from Existing Conditions and no significant impacts to bicycle facilities are identified.
  - The Project will provide a trail system parallel to Diablo Road available to the bicyclist community as well as a public trail easement for additional pedestrian and bicycle facilities.
- Under Cumulative Conditions, three intersections are projected to operate unacceptably during all three peak hours, one intersection is projected to operate unacceptably during two peak hours, and two intersections are projected to operate unacceptably during at least one peak hour. The following intersections are expected to operate at LOS E/F or with a V/C ratio greater than 1.0 under Cumulative Conditions:
  - <u>Intersection 3 – Diablo Road & McCauley Road/Green Valley Road</u>
    - LOS E in AM peak hour.
  - <u>Intersection 4 – Blemer Road/Cameo Drive & Green Valley Road</u>
    - V/C ratio greater than 1.0 during the AM and PM peak hours.
  - <u>Intersection 5 – Stone Valley Road & Green Valley Road</u>
    - LOS F during all three peak hours.
  - <u>Intersection 7 – Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard</u>
    - LOS F in the AM and School PM peak hours and LOS E in the PM peak hour.
  - <u>Intersection 8 – Blackhawk Road & Magee Ranch Road/Hidden Oak Drive</u>
    - LOS E in the AM peak hour.
  - <u>Intersection 9 – Blackhawk Drive & Blackhawk Road</u>
    - LOS E in the AM peak hour and LOS F in the School PM and PM peak hours.
- Bicycle level of service analysis results show the Diablo Road/Blackhawk Road corridor is deficient on the following segments under Cumulative Conditions:
  - Between Avenida Nueva and Diablo Creek Place in both directions during all peak hours, including weekend peak.

- Under Cumulative plus Project Conditions, all study intersections that would operate acceptably under Cumulative Conditions are expected to continue operating acceptably. The following intersections experience a significant impact because of the Project:
  - Intersection 7 – Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard
    - V/C ratio increases more than 5 percent during the AM and School PM peak hours.
      - Peak Hour Signal Warrant **satisfied** during the AM and School PM peak hours.
- With addition of the Project, bicycle level of service is anticipated to remain unchanged from Cumulative Conditions and no significant impacts to bicycle facilities are identified.
  - The Project will provide a trail system parallel to Diablo Road available to the bicyclist community as well as a public trail easement for additional pedestrian and bicycle facilities.
- For the proposed Project, mitigation measures are required at the significantly impacted intersection, as follows:
  - Intersection 7 – Diablo Road/Blackhawk Road & Mt. Diablo Scenic Boulevard
    - Install traffic signal to replace existing AWSC
- Installation of a traffic signal at the significantly impacted location would improve operations to LOS B or better during all three peak hours.
- Installation of traffic signals at the following intersections would improve operations to LOS B or better during all three peak hours, but are not the responsibility of the project sponsor:
  - Intersection 5 – Stone Valley Road & Green Valley Road
    - Peak Hour Signal Warrant **satisfied** for all three peak hours under Existing Conditions.
  - Intersection 8 – Blackhawk Road & Magee Ranch Road/Hidden Oak Drive
    - Peak Hour Signal Warrant **satisfied** for AM Peak Hour under Cumulative Conditions.
  - Intersection 9 – Blackhawk Drive & Blackhawk Road
    - Peak Hour Signal Warrant **satisfied** for School PM peak hour under Cumulative Conditions.
- The proposed access driveways would provide adequate access for cars and small trucks to the site. In addition, internal circulation is expected to be adequate for the on-site residential parking. Also, the proposed Main driveway (Appaloosa Street) would be able to accommodate estimated queuing of 6 vehicles in each approach lane, and Cinch Court would be able to accommodate approximately 3 to 4 queued vehicles.
- The Project would include personal garages and driveways for each unit, in addition to available on-street parking, which meets the Town's parking provision requirements.
- Supplemental, flashing beacon treatment should be implemented for the pedestrian crossing at Appaloosa Street.
- McCauley Road striping should be modified up to 350 feet south of Diablo Road.
- Southbound queuing at McCauley Road/Green Valley Road & Diablo Road can improve via signal retiming and coordination, as developed through a focused engineering study.
- The project sponsor shall coordinate with the TRAFFIX school bus program to include a new stop at the project site for each school in the vicinity on Route GV9/GV9, LC8/LC9, and MV10.
  - Project-generated trips associated with schools would reduce, lessening Project-impact on the surrounding roadways.

Appendix A INTERSECTION TURNING MOVEMENT COUNTS

Intersection Turning Movement Counts

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-001 Ackerman Dr/Diablo Rd & El Cerro Blvd
Date : 3/30/2017

Unshifted Count = All Vehicles & Uturns

	Ackerman Dr/Diablo Rd Southbound					El Cerro Blvd Westbound					Ackerman Dr/Diablo Rd Northbound					El Cerro Blvd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	2	2	0	0	4	57	89	0	0	146	5	1	77	0	83	0	45	3	0	48	281	0
7:15	2	7	0	0	9	113	79	1	0	193	7	1	110	0	118	0	57	4	0	61	381	0
7:30	1	6	1	0	8	134	160	2	0	296	3	3	109	0	115	0	86	3	0	89	508	0
7:45	1	8	0	0	9	165	120	0	0	285	11	1	135	0	147	2	116	8	0	126	567	0
Total	6	23	1	0	30	469	448	3	0	920	26	6	431	0	463	2	304	18	0	324	1737	0
8:00	0	6	0	0	6	110	92	1	0	203	17	2	195	0	214	1	85	7	0	93	516	0
8:15	0	11	1	0	12	131	118	1	0	250	25	6	124	0	155	4	54	16	0	74	491	0
8:30	3	10	2	0	15	151	138	1	0	290	47	7	100	0	154	1	99	22	1	123	582	1
8:45	1	8	0	0	9	107	109	1	0	217	18	3	90	0	111	1	65	14	0	80	417	0
Total	4	35	3	0	42	499	457	4	0	960	107	18	509	0	634	7	303	59	1	370	2006	1
14:00	2	3	0	0	5	68	87	1	0	156	6	5	119	0	130	0	59	4	1	64	355	1
14:15	2	3	1	0	6	82	91	1	0	174	9	5	115	0	129	3	69	10	0	82	391	0
14:30	0	6	1	0	7	115	113	1	0	229	9	2	97	0	108	2	68	14	0	84	428	0
14:45	2	9	2	0	13	108	100	4	0	212	5	1	111	0	117	0	101	17	1	119	461	1
Total	6	21	4	0	31	373	391	7	0	771	29	13	442	0	484	5	297	45	2	349	1635	2
15:00	1	8	0	0	9	94	124	2	0	220	17	9	131	0	157	0	98	14	1	113	499	1
15:15	0	5	2	0	7	142	124	1	0	267	28	12	142	0	182	1	104	14	1	120	576	1
15:30	1	3	1	0	5	139	88	3	0	230	26	3	142	0	171	0	90	9	0	99	505	0
15:45	0	4	2	0	6	148	111	1	0	260	21	3	133	0	157	4	99	8	0	111	534	0
Total	2	20	5	0	27	523	447	7	0	977	92	27	548	0	667	5	391	45	2	443	2114	2
16:00	2	4	4	0	10	96	67	2	0	165	23	7	158	0	188	0	71	6	1	78	441	1
16:15	1	4	1	0	6	106	65	1	0	172	18	6	154	0	178	0	72	10	0	82	438	0
16:30	1	2	1	0	4	106	90	0	0	196	22	2	151	0	175	0	69	13	0	82	457	0
16:45	3	4	1	0	8	114	54	1	0	169	12	9	167	0	188	0	86	12	0	98	463	0
Total	7	14	7	0	28	422	276	4	0	702	75	24	630	0	729	0	298	41	1	340	1799	1
17:00	2	6	4	0	12	102	55	1	0	158	12	10	195	0	217	1	88	12	0	101	488	0
17:15	1	4	0	0	5	118	61	0	0	179	17	5	173	0	195	0	90	21	1	112	491	1
17:30	0	6	1	0	7	89	46	1	0	136	13	9	160	0	182	0	61	18	0	79	404	0
17:45	0	4	0	0	4	84	62	2	0	148	13	8	149	0	170	1	82	11	0	94	416	0
Total	3	20	5	0	28	393	224	4	0	621	55	32	677	0	764	2	321	62	1	386	1799	1
Grand Total	28	133	25	0	186	2679	2243	29	0	4951	384	120	3237	0	3741	21	1914	270	7	2212	11090	7
Apprch %	15.1%	71.5%	13.4%	0.0%		54.1%	45.3%	0.6%	0.0%		10.3%	3.2%	86.5%	0.0%		0.9%	86.5%	12.2%	0.3%			
Total %	0.3%	1.2%	0.2%	0.0%	1.7%	24.2%	20.2%	0.3%	0.0%	44.6%	3.5%	1.1%	29.2%	0.0%	33.7%	0.2%	17.3%	2.4%	0.1%	19.9%	100.0%	

AM PEAK HOUR	Ackerman Dr/Diablo Rd Southbound					El Cerro Blvd Westbound					Ackerman Dr/Diablo Rd Northbound					El Cerro Blvd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	1	8	0	0	9	165	120	0	0	285	11	1	135	0	147	2	116	8	0	126	567
8:00	0	6	0	0	6	110	92	1	0	203	17	2	195	0	214	1	85	7	0	93	516
8:15	0	11	1	0	12	131	118	1	0	250	25	6	124	0	155	4	54	16	0	74	491
8:30	3	10	2	0	15	151	138	1	0	290	47	7	100	0	154	1	99	22	1	123	582
Total Volume	4	35	3	0	42	557	468	3	0	1028	100	16	554	0	670	8	354	53	1	416	2156
% App Total	9.5%	83.3%	7.1%	0.0%		54.2%	45.5%	0.3%	0.0%		14.9%	2.4%	82.7%	0.0%		1.9%	85.1%	12.7%	0.2%		
PHF	.333	.795	.375	.000	.700	.844	.848	.750	.000	.886	.532	.571	.710	.000	.783	.500	.763	.602	.250	.825	.926

NOON PEAK	Ackerman Dr/Diablo Rd Southbound					El Cerro Blvd Westbound					Ackerman Dr/Diablo Rd Northbound					El Cerro Blvd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	1	8	0	0	9	94	124	2	0	220	17	9	131	0	157	0	98	14	1	113	499
15:15	0	5	2	0	7	142	124	1	0	267	28	12	142	0	182	1	104	14	1	120	576
15:30	1	3	1	0	5	139	88	3	0	230	26	3	142	0	171	0	90	9	0	99	505
15:45	0	4	2	0	6	148	111	1	0	260	21	3	133	0	157	4	99	8	0	111	534
Total Volume	2	20	5	0	27	523	447	7	0	977	92	27	548	0	667	5	391	45	2	443	2114
% App Total	7.4%	74.1%	18.5%	0.0%		53.5%	45.8%	0.7%	0.0%		13.8%	4.0%	82.2%	0.0%		1.1%	88.3%	10.2%	0.5%		
PHF	.500	.625	.625	.000	.750	.883	.901	.583	.000	.915	.821	.563	.965	.000	.916	.313	.940	.804	.500	.923	.918

PM PEAK HOUR	Ackerman Dr/Diablo Rd Southbound					El Cerro Blvd Westbound					Ackerman Dr/Diablo Rd Northbound					El Cerro Blvd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	1	2	1	0	4	106	90	0	0	196	22	2	151	0	175	0	69	13	0	82	457
16:45	3	4	1	0	8	114	54	1	0	169	12	9	167	0	188	0	86	12	0	98	463
17:00	2	6	4	0	12	102	55	1	0	158	12	10	195	0	217	1	88	12	0	101	488
17:15	1	4	0	0	5	118	61	0	0	179	17	5	173	0	195	0	90	21	1	112	491
Total Volume	7	16	6	0	29	440	260	2	0	702	63	26	686	0	775	1	333	58	1	393	1899
% App Total	24.1%	55.2%	20.7%	0.0%		62.7%	37.0%	0.3%	0.0%		8.1%	3.4%	88.5%	0.0%		0.3%	84.7%	14.8%	0.3%		
PHF	.583	.667	.375	.000	.604	.932	.722	.500	.000	.895	.716	.650	.879	.000	.893	.250	.925	.690	.250	.877	.967

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-001 Ackerman Dr/Diablo Rd & El Cerro Blvd
Date : 3/30/2017

Bank 1 Count = Bikes & Peds

	Ackerman Dr/Diablo Rd Southbound					El Cerro Blvd Westbound					Ackerman Dr/Diablo Rd Northbound					El Cerro Blvd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:15	0	0	0	1	0	1	3	0	0	4	0	0	1	0	1	0	1	0	2	1	6	3
7:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
7:45	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	2	0	2	2
Total	0	1	0	2	1	2	3	0	0	5	0	0	2	0	2	0	2	0	4	2	10	6
8:00	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	3	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30	0	1	0	1	1	0	1	0	3	1	0	0	0	0	0	0	0	0	1	0	2	5
8:45	0	0	0	0	0	0	0	0	1	0	0	1	3	0	4	0	0	0	1	0	4	2
Total	0	1	0	1	1	0	1	0	4	1	0	2	5	1	7	0	0	0	2	0	9	8
14:00	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1	3	0
14:15	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
14:30	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	1	0	2	1
14:45	0	0	0	2	0	4	0	0	0	4	0	0	1	1	1	0	0	0	4	0	5	7
Total	0	0	0	2	0	7	0	1	0	8	0	0	2	1	2	0	1	0	5	1	11	8
15:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0
15:15	0	0	0	0	0	0	1	0	3	1	0	0	2	0	2	0	0	0	0	0	3	3
15:30	0	0	0	3	0	1	0	0	1	1	0	0	2	0	2	0	3	0	3	3	6	7
15:45	0	0	0	1	0	0	1	0	0	1	0	1	2	0	3	0	0	0	1	0	4	2
Total	1	0	0	4	1	1	2	0	4	3	0	1	6	0	7	0	4	0	4	4	15	12
16:00	0	0	0	2	0	1	0	0	0	1	0	0	1	0	1	0	0	0	2	0	2	4
16:15	0	0	0	5	0	1	1	0	0	2	0	0	1	1	1	0	0	1	0	1	4	6
16:30	0	0	0	5	0	1	1	0	6	2	0	0	1	8	1	0	1	1	3	2	5	22
16:45	0	0	0	1	0	0	2	0	0	2	0	0	0	1	0	0	1	0	0	1	3	2
Total	0	0	0	13	0	3	4	0	6	7	0	0	3	10	3	0	2	2	5	4	14	34
17:00	0	0	0	0	0	0	0	0	3	0	0	0	1	4	1	0	0	1	0	1	2	7
17:15	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	2	0
17:30	0	0	0	0	0	0	0	0	2	0	0	0	3	0	3	0	2	0	0	2	5	2
17:45	0	0	0	0	0	0	2	0	0	2	1	0	7	1	8	0	0	1	0	1	11	1
Total	0	0	0	0	0	0	3	0	5	3	1	0	12	5	13	0	2	2	0	4	20	10
Grand Total	1	2	0	22	3	13	13	1	19	27	1	3	30	17	34	0	11	4	20	15	79	78
Apprch %	33.3%	66.7%	0.0%			48.1%	48.1%	3.7%			2.9%	8.8%	88.2%			0.0%	73.3%	26.7%				
Total %	1.3%	2.5%	0.0%		3.8%	16.5%	16.5%	1.3%		34.2%	1.3%	3.8%	38.0%		43.0%	0.0%	13.9%	5.1%		19.0%	100.0%	

AM PEAK HOUR	Ackerman Dr/Diablo Rd Southbound					El Cerro Blvd Westbound					Ackerman Dr/Diablo Rd Northbound					El Cerro Blvd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	2	0	2
8:00	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	3
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
8:30	0	1	0	1	1	0	1	0	3	1	0	0	0	0	0	0	0	0	1	0	2
Total Volume	0	1	0	1	1	1	1	0	3	2	0	1	3	1	4	0	0	0	3	0	7
% App Total	0.0%	100.0%	0.0%			50.0%	50.0%	0.0%			0.0%	25.0%	75.0%			0.0%	0.0%	0.0%			
PHF	.000	.250	.000		.250	.250	.250	.000		.500	.000	.250	.375		.333	.000	.000	.000		.000	.583

NOON PEAK	Ackerman Dr/Diablo Rd Southbound					El Cerro Blvd Westbound					Ackerman Dr/Diablo Rd Northbound					El Cerro Blvd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
15:15	0	0	0	0	0	0	1	0	3	1	0	0	2	0	2	0	0	0	0	0	3
15:30	0	0	0	3	0	1	0	0	1	1	0	0	2	0	2	0	3	0	3	3	6
15:45	0	0	0	1	0	0	1	0	0	1	0	1	2	0	3	0	0	0	1	0	4
Total Volume	1	0	0	4	1	1	2	0	4	3	0	1	6	0	7	0	4	0	4	4	15
% App Total	100.0%	0.0%	0.0%			33.3%	66.7%	0.0%			0.0%	14.3%	85.7%			0.0%	100.0%	0.0%			
PHF	.250	.000	.000		.250	.250	.500	.000		.750	.000	.250	.750		.583	.000	.333	.000		.333	.625

PM PEAK HOUR	Ackerman Dr/Diablo Rd Southbound					El Cerro Blvd Westbound					Ackerman Dr/Diablo Rd Northbound					El Cerro Blvd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	0	5	0	1	1	0	6	2	0	0	1	8	1	0	1	1	3	2	5
16:45	0	0	0	1	0	0	2	0	0	2	0	0	0	1	0	0	1	0	0	1	3
17:00	0	0	0	0	0	0	0	0	3	0	0	0	1	4	1	0	0	1	0	1	2
17:15	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	2
Total Volume	0	0	0	6	0	1	4	0	9	5	0	0	3	13	3	0	2	2	3	4	12
% App Total	0.0%	0.0%	0.0%			20.0%	80.0%	0.0%			0.0%	0.0%	100.0%			0.0%	50.0%	50.0%			
PHF	.000	.000	.000		.000	.250	.500	.000		.625	.000	.000	.750		.750	.000	.500	.500		.500	.600

Ackerman Dr/Diablo Rd & El Cerro Blvd

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-001

AM Peak Hour	07:45 - 08:45
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	16:30 - 17:30

Peak Hour Summary

Southbound Approach (Ackerman Dr/Diablo Rc)

AM	3	35	4	0	27	AM
NOON	5	20	2	0	39	NOON
PM	6	16	7	0	29	PM

Eastbound Approach (El Cerro Blvd)

	AM	NOON	PM
	572	546	330
	1	2	1
	8	5	1
	354	391	333
	53	45	58
	AM	NOON	PM

Westbound Approach

	AM	NOON	PM
	3	7	2
	468	447	260
	557	523	440
	0	0	0
	912	941	1026
	AM	NOON	PM

CONTROL

Northbound Approach

AM	645	0	100	16	554	AM
NOON	588	0	92	27	548	NOON
PM	514	0	63	26	686	PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

North Leg		
42	27	AM
27	39	NOON
29	29	PM

West Leg			East Leg		
AM	NOON	PM			
572	546	330	1028	977	702
416	443	393	912	941	1026
			AM	NOON	PM

South Leg		
645	670	AM
588	667	NOON
514	775	PM

Total Volume Per Leg

North Leg		
69		AM
66		NOON
58		PM

West Leg			East Leg		
AM	NOON	PM			
988	989	723	1940	1918	1728
			AM	NOON	PM

South Leg	
1315	AM
1255	NOON
1289	PM

Ackerman Dr/Diablo Rd & El Cerro Blvd

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-001

AM Peak Hour	07:45 - 08:45
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	16:30 - 17:30

Peak Hour Summary

Southbound Approach (Ackerman Dr/Diablo Rd)

AM	0	1	0	0	1	AM
NOON	0	0	1	0	1	NOON
PM	0	0	0	0	0	PM

Eastbound Approach (El Cerro Blvd)

AM	NOON	PM
1	2	4
0	0	0
0	0	0
0	4	2
0	0	2

Westbound Approach

AM	NOON	PM
0	0	0
1	2	4
1	1	1
0	0	0
3	11	5

CONTROL

Northbound Approach

AM	2	0	0	1	3	AM
NOON	1	0	0	1	6	NOON
PM	3	0	0	0	3	PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	1	1	AM
	1	1	NOON
	0	0	PM

West Leg AM	West Leg NOON	West Leg PM	East Leg AM	East Leg NOON	East Leg PM
1	2	4	2	3	5
0	4	4	3	11	5

	South Leg	
AM	2	4
NOON	1	7
PM	3	3

Total Volume Per Leg

	North Leg
AM	2
NOON	2
PM	0

West Leg AM	West Leg NOON	West Leg PM	East Leg AM	East Leg NOON	East Leg PM
1	6	8	5	14	10

	South Leg
AM	6
NOON	8
PM	6

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-002 Matadera Way & Diablo Rd
Date : 3/30/2017

Unshifted Count = All Vehicles & Uturns

	Matadera Way Southbound					Diablo Rd Westbound					Matadera Way Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	1	0	3	0	4	1	136	1	0	138	0	0	0	0	0	5	114	2	0	121	263	0
7:15	1	0	6	0	7	3	200	1	0	204	0	0	0	0	0	24	135	3	0	162	373	0
7:30	0	0	25	0	25	3	246	4	0	253	0	0	0	0	0	40	141	8	0	189	467	0
7:45	3	3	84	0	90	5	195	4	0	204	0	0	0	0	0	56	185	14	0	255	549	0
Total	5	3	118	0	126	12	777	10	0	799	0	0	0	0	0	125	575	27	0	727	1652	0
8:00	1	1	20	0	22	7	187	4	0	198	0	0	0	0	0	22	249	5	0	276	496	0
8:15	3	5	18	0	26	5	223	7	0	235	0	0	0	0	0	21	159	7	0	187	448	0
8:30	3	6	17	0	26	14	243	4	0	261	0	0	0	0	0	19	161	16	0	196	483	0
8:45	3	1	11	0	15	3	191	4	1	199	0	0	0	0	0	7	128	4	0	139	353	1
Total	10	13	66	0	89	29	844	19	1	893	0	0	0	0	0	69	697	32	0	798	1780	1
14:00	3	0	5	0	8	0	136	2	0	138	0	0	0	0	0	15	163	0	0	178	324	0
14:15	2	0	11	0	13	2	162	6	0	170	0	0	0	0	0	31	151	3	0	185	368	0
14:30	4	1	53	0	58	0	178	2	0	180	0	0	0	0	0	14	138	2	0	154	392	0
14:45	0	0	13	0	13	4	196	5	0	205	0	0	0	0	0	10	184	6	0	200	418	0
Total	9	1	82	0	92	6	672	15	0	693	0	0	0	0	0	70	636	11	0	717	1502	0
15:00	2	3	17	0	22	6	205	5	0	216	0	0	0	0	0	24	205	6	0	235	473	0
15:15	14	0	63	0	77	4	199	8	0	211	0	0	0	0	0	31	214	2	0	247	535	0
15:30	5	0	37	0	42	4	188	5	0	197	0	0	0	0	0	9	214	1	0	224	463	0
15:45	2	1	12	0	15	1	231	3	0	235	0	0	0	0	0	18	227	0	0	245	495	0
Total	23	4	129	0	156	15	823	21	0	859	0	0	0	0	0	82	860	9	0	951	1966	0
16:00	2	0	22	0	24	5	128	1	0	134	0	0	0	0	0	7	215	4	0	226	384	0
16:15	3	0	13	0	16	3	161	1	0	165	0	0	0	0	0	11	192	6	1	210	391	1
16:30	6	0	8	0	14	4	166	4	0	174	0	0	0	0	0	11	202	1	0	214	402	0
16:45	4	0	5	0	9	3	157	1	0	161	0	0	0	0	0	13	225	2	0	240	410	0
Total	15	0	48	0	63	15	612	7	0	634	0	0	0	0	0	42	834	13	1	890	1587	1
17:00	5	0	11	0	16	2	132	2	0	136	0	0	0	0	0	18	254	3	0	275	427	0
17:15	2	0	11	0	13	1	160	2	0	163	0	0	0	0	0	15	239	5	0	259	435	0
17:30	1	0	12	0	13	2	125	0	0	127	0	0	0	0	0	8	199	2	0	209	349	0
17:45	2	0	13	0	15	1	115	3	0	119	0	0	0	0	0	12	201	1	0	214	348	0
Total	10	0	47	0	57	6	532	7	0	545	0	0	0	0	0	53	893	11	0	957	1559	0
Grand Total	72	21	490	0	583	83	4260	79	1	4423	0	0	0	0	0	441	4495	103	1	5040	10046	2
Apprch %	12.3%	3.6%	84.0%	0.0%		1.9%	96.3%	1.8%	0.0%		0.0%	0.0%	0.0%	0.0%		8.8%	89.2%	2.0%	0.0%			
Total %	0.7%	0.2%	4.9%	0.0%	5.8%	0.8%	42.4%	0.8%	0.0%	44.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.4%	44.7%	1.0%	0.0%	50.2%	100.0%	

AM PEAK HOUR	Matadera Way Southbound					Diablo Rd Westbound					Matadera Way Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	3	3	84	0	90	5	195	4	0	204	0	0	0	0	0	56	185	14	0	255	549
8:00	1	1	20	0	22	7	187	4	0	198	0	0	0	0	0	22	249	5	0	276	496
8:15	3	5	18	0	26	5	223	7	0	235	0	0	0	0	0	21	159	7	0	187	448
8:30	3	6	17	0	26	14	243	4	0	261	0	0	0	0	0	19	161	16	0	196	483
Total Volume	10	15	139	0	164	31	848	19	0	898	0	0	0	0	0	118	754	42	0	914	1976
% App Total	6.1%	9.1%	84.8%	0.0%		3.5%	94.4%	2.1%	0.0%		0.0%	0.0%	0.0%	0.0%		12.9%	82.5%	4.6%	0.0%		
PHF	.833	.625	.414	.000	.456	.554	.872	.679	.000	.860	.000	.000	.000	.000	.000	.527	.757	.656	.000	.828	.900

NOON PEAK	Matadera Way Southbound					Diablo Rd Westbound					Matadera Way Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	2	3	17	0	22	6	205	5	0	216	0	0	0	0	0	24	205	6	0	235	473
15:15	14	0	63	0	77	4	199	8	0	211	0	0	0	0	0	31	214	2	0	247	535
15:30	5	0	37	0	42	4	188	5	0	197	0	0	0	0	0	9	214	1	0	224	463
15:45	2	1	12	0	15	1	231	3	0	235	0	0	0	0	0	18	227	0	0	245	495
Total Volume	23	4	129	0	156	15	823	21	0	859	0	0	0	0	0	82	860	9	0	951	1966
% App Total	14.7%	2.6%	82.7%	0.0%		1.7%	95.8%	2.4%	0.0%		0.0%	0.0%	0.0%	0.0%		8.6%	90.4%	0.9%	0.0%		
PHF	.411	.333	.512	.000	.506	.625	.891	.656	.000	.914	.000	.000	.000	.000	.000	.661	.947	.375	.000	.963	.919

PM PEAK HOUR	Matadera Way Southbound					Diablo Rd Westbound					Matadera Way Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	6	0	8	0	14	4	166	4	0	174	0	0	0	0	0	11	202	1	0	214	402
16:45	4	0	5	0	9	3	157	1	0	161	0	0	0	0	0	13	225	2	0	240	410
17:00	5	0	11	0	16	2	132	2	0	136	0	0	0	0	0	18	254	3	0	275	427
17:15	2	0	11	0	13	1	160	2	0	163	0	0	0	0	0	15	239	5	0	259	435
Total Volume	17	0	35	0	52	10	615	9	0	634	0	0	0	0	0	57	920	11	0	988	1674
% App Total	32.7%	0.0%	67.3%	0.0%		1.6%	97.0%	1.4%	0.0%		0.0%	0.0%	0.0%	0.0%		5.8%	93.1%	1.1%	0.0%		
PHF	.708	.000	.795	.000	.813	.625	.926	.563	.000	.911	.000	.000	.000	.000	.000	.792	.906	.550	.000	.898	.962

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-002 Matadera Way & Diablo Rd
Date : 3/30/2017

Bank 1 Count = Bikes & Peds

	Matadera Way Southbound					Diablo Rd Westbound					Matadera Way Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:15	0	0	0	1	0	0	4	0	0	4	0	0	0	0	0	1	1	0	0	2	6	1
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	2	2
7:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	1	0	0	3	4	0
Total	0	0	0	1	0	0	5	0	0	5	0	0	0	0	0	5	2	0	3	7	12	4
8:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	9	0	0	12
8:30	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0	0	0	0	12	0	1	14
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	3	2	2	5
Total	0	0	0	2	0	0	1	0	0	1	0	0	0	6	0	0	2	0	26	2	3	34
14:00	0	0	0	1	0	0	3	0	0	3	0	0	0	5	0	0	1	0	1	1	4	7
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	4	1	4	0	0	0	0	0	0	0	0	1	0	0	0	0	11	0	4	13
14:45	0	2	1	0	3	0	1	0	0	1	2	0	0	5	2	0	2	0	1	2	8	6
Total	0	2	5	2	7	0	4	0	0	4	2	0	0	11	2	0	3	0	13	3	16	26
15:00	0	0	0	1	0	0	0	0	0	0	0	2	0	0	2	0	2	0	12	2	4	13
15:15	0	0	0	2	0	0	1	1	0	2	0	0	0	0	0	0	2	0	15	2	4	17
15:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	8	0	1	8	9	1
15:45	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	2	0	0	2	6	0
Total	0	0	1	3	1	0	4	2	0	6	0	2	0	0	2	0	14	0	28	14	23	31
16:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	3	1	2	3
16:15	0	0	0	4	0	0	2	0	0	2	0	0	0	1	0	0	1	0	1	1	3	6
16:30	0	0	0	4	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	4
16:45	0	0	0	0	0	0	2	0	0	2	0	0	0	1	0	0	2	0	1	2	4	2
Total	0	0	0	8	0	0	7	0	0	7	0	0	0	2	0	0	4	0	5	4	11	15
17:00	0	1	0	0	1	0	0	1	0	1	2	0	0	2	2	1	1	2	1	4	8	3
17:15	0	0	0	0	0	0	1	0	0	1	1	1	0	0	2	0	1	0	4	1	4	4
17:30	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	4	0	1	4	5	1
17:45	0	0	0	1	0	0	2	0	0	2	0	0	0	1	0	1	1	0	0	2	4	2
Total	0	1	0	1	1	0	3	2	0	5	3	1	0	3	4	2	7	2	6	11	21	10
Grand Total	0	3	6	17	9	0	24	4	0	28	5	3	0	22	8	7	32	2	81	41	86	120
Apprch %	0.0%	33.3%	66.7%			0.0%	85.7%	14.3%			62.5%	37.5%	0.0%			17.1%	78.0%	4.9%				
Total %	0.0%	3.5%	7.0%		10.5%	0.0%	27.9%	4.7%		32.6%	5.8%	3.5%	0.0%		9.3%	8.1%	37.2%	2.3%		47.7%	100.0%	

AM PEAK HOUR	Matadera Way Southbound					Diablo Rd Westbound					Matadera Way Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	1	0	0	3	4
8:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	9	0	0
8:30	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0	0	0	0	12	0	1
Total Volume	0	0	0	2	0	0	2	0	0	2	0	0	0	4	0	2	1	0	23	3	5
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			66.7%	33.3%	0.0%			
PHF	.000	.000	.000		.000	.000	.500	.000		.500	.000	.000	.000		.000	.250	.250	.000		.250	.313

NOON PEAK	Matadera Way Southbound					Diablo Rd Westbound					Matadera Way Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	0	0	0	1	0	0	0	0	0	0	0	2	0	0	2	0	2	0	12	2	4
15:15	0	0	0	2	0	0	1	1	0	2	0	0	0	0	0	0	2	0	15	2	4
15:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	8	0	1	8	9
15:45	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	2	0	0	2	6
Total Volume	0	0	1	3	1	0	4	2	0	6	0	2	0	0	2	0	14	0	28	14	23
% App Total	0.0%	0.0%	100.0%			0.0%	66.7%	33.3%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.250		.250	.000	.333	.500		.375	.000	.250	.000		.250	.000	.438	.000		.438	.639

PM PEAK HOUR	Matadera Way Southbound					Diablo Rd Westbound					Matadera Way Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	0	4	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
16:45	0	0	0	0	0	0	2	0	0	2	0	0	0	1	0	0	2	0	1	2	4
17:00	0	1	0	0	1	0	0	1	0	1	2	0	0	2	2	1	1	2	1	4	8
17:15	0	0	0	0	0	0	1	0	0	1	1	1	0	0	2	0	1	0	4	1	4
Total Volume	0	1	0	4	1	0	5	1	0	6	3	1	0	3	4	1	4	2	6	7	18
% App Total	0.0%	100.0%	0.0%			0.0%	83.3%	16.7%			75.0%	25.0%	0.0%			14.3%	57.1%	28.6%			
PHF	.000	.250	.000		.250	.000	.625	.250		.750	.375	.250	.000		.500	.250	.500	.250		.438	.563

Matadera Way & Diablo Rd

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-002

Peak Hour Summary	
AM Peak Hour	07:45 - 08:45
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	16:30 - 17:30

Southbound Approach (Matadera Way)

AM	139	15	10	0	137	AM
NOON	129	4	23	0	103	NOON
PM	35	0	17	0	66	PM

Eastbound Approach (Diablo Rd)

	AM	NOON	PM
	987	952	650
	0	0	0
	118	82	57
	754	860	920
	42	9	11
	AM	NOON	PM

Westbound Approach

	AM	NOON	PM
	19	21	9
	848	823	615
	31	15	10
	0	0	0
	764	883	937
	AM	NOON	PM

CONTROL

Northbound Approach

AM	88	0	0	0	0	AM
NOON	28	0	0	0	0	NOON
PM	21	0	0	0	0	PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	164	137	AM
	156	103	NOON
	52	66	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
987	952	650		898	859	634
914	951	988		764	883	937

	South Leg	
AM	88	0
NOON	28	0
PM	21	0

Total Volume Per Leg

	North Leg	
	301	AM
	259	NOON
	118	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
1901	1903	1638		1662	1742	1571

	South Leg
AM	88
NOON	28
PM	21

Matadera Way & Diablo Rd

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-002

AM Peak Hour	07:45 - 08:45
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	16:30 - 17:30

Peak Hour Summary

Southbound Approach

Matadera Way

AM	0	0	0	0	2	AM
NOON	1	0	0	0	4	NOON
PM	0	1	0	0	3	PM

Diablo Rd

Eastbound Approach

AM	NOON	PM
2	5	8
0	0	0
2	0	1
1	14	4
0	0	2
AM	NOON	PM

CONTROL

Westbound Approach

AM	NOON	PM
0	2	1
2	4	5
0	0	0
0	0	0
1	14	4
AM	NOON	PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Northbound Approach

AM	0	0	0	0	0	AM
NOON	0	0	0	2	0	NOON
PM	3	0	3	1	0	PM

Total Ins & Outs

	AM	NOON	PM
North Leg	0	1	1
	2	4	3
East Leg	2	6	6
	1	14	4
West Leg	2	5	8
	3	14	7
South Leg	0	0	3
	0	2	4

Total Volume Per Leg

	AM	NOON	PM
North Leg	2	5	4
East Leg	3	20	10
West Leg	5	19	15
South Leg	0	2	7

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-003 Green Valley Rd/McCauley Rd & Diablo Rd
Date : 3/30/2017

Unshifted Count = All Vehicles & Uturns

	Green Valley Rd/McCauley Rd Southbound					Diablo Rd Westbound					Green Valley Rd/McCauley Rd Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	47	1	55	0	103	0	72	92	0	164	13	1	1	0	15	61	45	1	0	107	389	0
7:15	81	0	100	0	181	2	75	130	0	207	20	7	3	0	30	95	47	6	0	148	566	0
7:30	50	4	105	0	159	5	129	46	0	180	24	2	3	0	29	47	73	10	0	130	498	0
7:45	63	4	81	0	148	7	92	87	0	186	23	8	6	0	37	67	112	12	0	191	562	0
Total	241	9	341	0	591	14	368	355	0	737	80	18	13	0	111	270	277	29	0	576	2015	0
8:00	40	0	72	0	112	9	97	89	0	195	12	2	2	0	16	140	106	10	0	256	579	0
8:15	47	30	108	0	185	27	108	103	0	238	37	20	11	0	68	84	48	19	0	151	642	0
8:30	40	34	93	0	167	27	92	24	0	143	49	24	22	0	95	57	93	22	0	172	577	0
8:45	21	6	65	0	92	2	92	9	0	103	28	3	15	0	46	46	82	24	0	152	393	0
Total	148	70	338	0	556	65	389	225	0	679	126	49	50	0	225	327	329	75	0	731	2191	0
14:00	20	3	43	0	66	0	85	28	0	113	7	2	4	0	13	65	95	10	0	170	362	0
14:15	25	4	49	0	78	1	102	32	0	135	9	3	2	0	14	51	78	8	0	137	364	0
14:30	45	8	59	0	112	5	103	40	0	148	12	1	5	0	18	41	77	18	0	136	414	0
14:45	33	8	53	0	94	9	120	44	0	173	25	5	4	0	34	65	69	27	0	161	462	0
Total	123	23	204	0	350	15	410	144	0	569	53	11	15	0	79	222	319	63	0	604	1602	0
15:00	48	11	70	0	129	9	114	68	0	191	16	10	6	0	32	101	105	25	0	231	583	0
15:15	97	6	49	0	152	1	123	74	0	198	30	19	16	0	65	80	130	19	0	229	644	0
15:30	109	7	77	0	193	1	103	61	0	165	10	3	5	0	18	116	97	22	0	235	611	0
15:45	64	3	92	0	159	5	113	65	0	183	11	5	4	0	20	99	107	24	0	230	592	0
Total	318	27	288	0	633	16	453	268	0	737	67	37	31	0	135	396	439	90	0	925	2430	0
16:00	43	5	40	0	88	1	83	77	0	161	8	4	4	0	16	119	89	17	0	225	490	0
16:15	32	4	55	0	91	4	74	75	0	153	23	5	0	0	28	97	82	18	0	197	469	0
16:30	41	3	46	0	90	6	108	79	0	193	18	5	1	0	24	111	80	19	0	210	517	0
16:45	36	2	67	0	105	4	68	90	0	162	11	11	2	0	24	121	73	16	0	210	501	0
Total	152	14	208	0	374	15	333	321	0	669	60	25	7	0	92	448	324	70	0	842	1977	0
17:00	39	3	54	0	96	2	78	100	0	180	9	5	4	0	18	154	90	18	0	262	556	0
17:15	61	3	64	0	128	2	72	101	0	175	12	3	1	0	16	152	94	12	0	258	577	0
17:30	64	4	57	0	125	2	62	89	0	153	10	2	5	0	17	128	69	10	0	207	502	0
17:45	43	4	49	0	96	3	66	80	0	149	14	4	3	0	21	101	80	14	0	195	461	0
Total	207	14	224	0	445	9	278	370	0	657	45	14	13	0	72	535	333	54	0	922	2096	0
Grand Total	1189	157	1603	0	2949	134	2231	1683	0	4048	431	154	129	0	714	2198	2021	381	0	4600	12311	0
Apprch %	40.3%	5.3%	54.4%	0.0%		3.3%	55.1%	41.6%	0.0%		60.4%	21.6%	18.1%	0.0%		47.8%	43.9%	8.3%	0.0%			
Total %	9.7%	1.3%	13.0%	0.0%	24.0%	1.1%	18.1%	13.7%	0.0%	32.9%	3.5%	1.3%	1.0%	0.0%	5.8%	17.9%	16.4%	3.1%	0.0%	37.4%	100.0%	

AM PEAK HOUR	Green Valley Rd/McCauley Rd Southbound					Diablo Rd Westbound					Green Valley Rd/McCauley Rd Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	63	4	81	0	148	7	92	87	0	186	23	8	6	0	37	67	112	12	0	191	562
8:00	40	0	72	0	112	9	97	89	0	195	12	2	2	0	16	140	106	10	0	256	579
8:15	47	30	108	0	185	27	108	103	0	238	37	20	11	0	68	84	48	19	0	151	642
8:30	40	34	93	0	167	27	92	24	0	143	49	24	22	0	95	57	93	22	0	172	577
Total Volume	190	68	354	0	612	70	389	303	0	762	121	54	41	0	216	348	359	63	0	770	2360
% App Total	31.0%	11.1%	57.8%	0.0%		9.2%	51.0%	39.8%	0.0%		56.0%	25.0%	19.0%	0.0%		45.2%	46.6%	8.2%	0.0%		
PHF	.754	.500	.819	.000	.827	.648	.900	.735	.000	.800	.617	.563	.466	.000	.568	.621	.801	.716	.000	.752	.919

NOON PEAK	Green Valley Rd/McCauley Rd Southbound					Diablo Rd Westbound					Green Valley Rd/McCauley Rd Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	48	11	70	0	129	9	114	68	0	191	16	10	6	0	32	101	105	25	0	231	583
15:15	97	6	49	0	152	1	123	74	0	198	30	19	16	0	65	80	130	19	0	229	644
15:30	109	7	77	0	193	1	103	61	0	165	10	3	5	0	18	116	97	22	0	235	611
15:45	64	3	92	0	159	5	113	65	0	183	11	5	4	0	20	99	107	24	0	230	592
Total Volume	318	27	288	0	633	16	453	268	0	737	67	37	31	0	135	396	439	90	0	925	2430
% App Total	50.2%	4.3%	45.5%	0.0%		2.2%	61.5%	36.4%	0.0%		49.6%	27.4%	23.0%	0.0%		42.8%	47.5%	9.7%	0.0%		
PHF	.729	.614	.783	.000	.820	.444	.921	.905	.000	.931	.558	.487	.484	.000	.519	.853	.844	.900	.000	.984	.943

PM PEAK HOUR	Green Valley Rd/McCauley Rd Southbound					Diablo Rd Westbound					Green Valley Rd/McCauley Rd Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	41	3	46	0	90	6	108	79	0	193	18	5	1	0	24	111	80	19	0	210	517
16:45	36	2	67	0	105	4	68	90	0	162	11	11	2	0	24	121	73	16	0	210	501
17:00	39	3	54	0	96	2	78	100	0	180	9	5	4	0	18	154	90	18	0	262	556
17:15	61	3	64	0	128	2	72	101	0	175	12	3	1	0	16	152	94	12	0	258	577
Total Volume	177	11	231	0	419	14	326	370	0	710	50	24	8	0	82	538	337	65	0	940	2151
% App Total	42.2%	2.6%	55.1%	0.0%		2.0%	45.9%	52.1%	0.0%		61.0%	29.3%	9.8%	0.0%		57.2%	35.9%	6.9%	0.0%		
PHF	.725	.917	.862	.000	.818	.583	.755	.916	.000	.920	.694	.545	.500	.000	.854	.873	.896	.855	.000	.897	.932

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-003 Green Valley Rd/McCauley Rd & Diablo Rd
Date : 3/30/2017

Bank 1 Count = Bikes & Peds

	Green Valley Rd/McCauley Rd Southbound					Diablo Rd Westbound					Green Valley Rd/McCauley Rd Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:15	0	0	2	1	2	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	4	1
7:30	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
7:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	4	3	4	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	6	3
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	4	4	4	0	0	0	1	0	0	0	0	1	0	0	0	0	11	0	4	17
8:30	0	0	2	19	2	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0	2	50
8:45	0	0	0	6	0	0	0	0	1	0	0	0	1	0	1	2	0	0	3	2	3	10
Total	0	0	6	29	6	0	0	0	2	0	0	0	1	1	1	2	0	0	45	2	9	77
14:00	0	0	1	2	1	0	0	1	0	1	0	0	0	0	0	0	1	0	2	1	3	4
14:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	2
14:30	0	0	0	3	0	0	1	0	0	1	0	0	0	0	0	0	0	0	3	0	1	6
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2	0
Total	0	0	1	5	1	0	1	1	1	2	0	0	0	0	0	1	2	0	6	3	6	12
15:00	1	0	0	6	1	0	0	0	0	0	0	0	3	0	3	2	1	0	19	3	7	25
15:15	0	0	0	10	0	0	2	0	0	2	0	0	0	0	0	0	2	0	10	2	4	20
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	9	9	3
15:45	0	0	0	0	0	0	2	0	1	2	1	0	0	1	1	0	0	2	0	2	5	2
Total	1	0	0	16	1	0	4	0	1	4	1	0	3	1	4	5	6	5	32	16	25	50
16:00	0	1	1	1	2	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	4	1
16:15	1	0	1	2	2	0	0	0	1	0	0	1	0	1	1	0	1	0	2	1	4	6
16:30	0	0	1	10	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	10
16:45	0	0	0	10	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4	10
Total	1	1	3	23	5	0	4	0	1	4	0	1	0	1	1	1	3	0	2	4	14	27
17:00	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	1	0	2	1	2	3
17:15	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	3
17:30	1	0	0	16	1	0	1	0	0	1	0	0	0	0	0	3	2	0	0	5	7	16
17:45	0	0	0	8	0	0	1	0	0	1	0	0	0	0	0	0	0	1	2	1	2	10
Total	1	0	1	26	2	0	3	0	0	3	0	0	0	0	0	3	3	1	6	7	12	32
Grand Total	3	1	15	102	19	0	13	1	5	14	1	1	4	3	6	12	15	6	91	33	72	201
Apprch %	15.8%	5.3%	78.9%			0.0%	92.9%	7.1%			16.7%	16.7%	66.7%			36.4%	45.5%	18.2%				
Total %	4.2%	1.4%	20.8%		26.4%	0.0%	18.1%	1.4%		19.4%	1.4%	1.4%	5.6%		8.3%	16.7%	20.8%	8.3%		45.8%	100.0%	

AM PEAK HOUR	Green Valley Rd/McCauley Rd Southbound					Diablo Rd Westbound					Green Valley Rd/McCauley Rd Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	4	4	4	0	0	0	1	0	0	0	0	1	0	0	0	0	11	0	4
8:30	0	0	2	19	2	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0	2
Total Volume	0	0	6	24	6	0	0	0	1	0	0	0	0	1	0	0	0	0	42	0	6
% App Total	0.0%	0.0%	100.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.375		.375	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.375

NOON PEAK	Green Valley Rd/McCauley Rd Southbound					Diablo Rd Westbound					Green Valley Rd/McCauley Rd Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	1	0	0	6	1	0	0	0	0	0	0	0	3	0	3	2	1	0	19	3	7
15:15	0	0	0	10	0	0	2	0	0	2	0	0	0	0	0	0	2	0	10	2	4
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	9	9
15:45	0	0	0	0	0	0	2	0	1	2	1	0	0	1	1	0	0	2	0	2	5
Total Volume	1	0	0	16	1	0	4	0	1	4	1	0	3	1	4	5	6	5	32	16	25
% App Total	100.0%	0.0%	0.0%			0.0%	100.0%	0.0%			25.0%	0.0%	75.0%			31.3%	37.5%	31.3%			
PHF	.250	.000	.000		.250	.000	.500	.000		.500	.250	.000	.250		.333	.417	.500	.417		.444	.694

PM PEAK HOUR	Green Valley Rd/McCauley Rd Southbound					Diablo Rd Westbound					Green Valley Rd/McCauley Rd Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	1	10	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
16:45	0	0	0	10	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
17:00	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	1	0	2	1	2
17:15	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1
Total Volume	0	0	2	22	2	0	4	0	0	4	0	0	0	0	0	0	3	0	4	3	9
% App Total	0.0%	0.0%	100.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.500		.500	.000	.500	.000		.500	.000	.000	.000		.000	.000	.375	.000		.375	.563

Green Valley Rd/McCauley Rd & Diablo Rd

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-003

AM Peak Hour	07:45 - 08:45
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	16:30 - 17:30

Peak Hour Summary

Southbound Approach (Green Valley Rd/McCau)

AM	354	68	190	0	705
NOON	288	27	318	0	701
PM	231	11	177	0	932

Eastbound Approach (Diablo Rd)

	AM	NOON	PM
	864	808	607
	0	0	0
	348	396	538
	359	439	337
	63	90	65

Westbound Approach

	AM	NOON	PM
	303	268	370
	389	453	326
	70	16	14
	0	0	0
	590	788	522

CONTROL

Northbound Approach

AM	201	0	121	54	41
NOON	133	0	67	37	31
PM	90	0	50	24	8

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg	
AM	612	705
NOON	633	701
PM	419	932

	West Leg			East Leg		
AM	864	808	607	762	737	710
NOON	770	925	940	590	788	522
PM						

	South Leg	
AM	201	216
NOON	133	135
PM	90	82

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
AM	1317	1352	1634	417
NOON	1334	1525	1733	268
PM	1351	1232	1547	172

Green Valley Rd/McCauley Rd & Diablo Rd

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-003

AM Peak Hour	07:45 - 08:45
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	16:30 - 17:30

Peak Hour Summary

Southbound Approach (Green Valley Rd/McCau)

AM	6	0	0	0	0	AM
NOON	0	0	1	0	5	NOON
PM	2	0	0	0	0	PM

Eastbound Approach (Diablo Rd)

AM	NOON	PM
6	5	6
0	0	0
0	5	0
0	6	3
0	5	0
AM	NOON	PM

Westbound Approach

AM	NOON	PM
0	0	0
0	4	4
0	0	0
0	0	0
0	10	3
AM	NOON	PM

CONTROL

Northbound Approach

AM	0	0	0	0	AM
NOON	5	0	1	0	3	NOON
PM	0	0	0	0	PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	6	0	AM
	1	5	NOON
	2	0	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
6	5	6		0	4	4
0	16	3		0	10	3

	South Leg	
AM	0	0
NOON	5	4
PM	0	0

Total Volume Per Leg

	North Leg	
	6	AM
	6	NOON
	2	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
6	21	9		0	14	7

	South Leg
AM	0
NOON	9
PM	0

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-005 Green Valley Rd & Cameo Dr
Date : 3/30/2017

Unshifted Count = All Vehicles & Uturns

	Green Valley Rd Southbound					Cameo Dr/Blemer Rd Westbound					Green Valley Rd Northbound					Cameo Dr/Blemer Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	1	83	6	0	90	16	0	7	0	23	4	136	0	0	140	2	0	1	0	3	256	0
7:15	3	162	15	0	180	21	0	11	0	32	9	225	3	0	237	15	0	4	0	19	468	0
7:30	3	108	29	0	140	24	0	14	0	38	35	58	7	0	100	12	0	16	0	28	306	0
7:45	1	71	48	0	120	32	0	7	0	39	61	94	9	0	164	41	0	43	0	84	407	0
Total	8	424	98	0	530	93	0	39	0	132	109	513	19	0	641	70	0	64	0	134	1437	0
8:00	2	88	7	0	97	18	0	5	0	23	9	205	4	0	218	18	0	7	0	25	363	0
8:15	1	158	11	0	170	34	0	12	0	46	12	199	10	0	221	18	0	3	0	21	458	0
8:30	5	124	13	0	142	23	0	7	0	30	5	83	15	0	103	8	0	2	0	10	285	0
8:45	1	71	6	0	78	19	0	6	0	25	6	45	8	0	59	1	0	2	0	3	165	0
Total	9	441	37	0	487	94	0	30	0	124	32	532	37	0	601	45	0	14	0	59	1271	0
14:00	2	50	7	0	59	14	0	3	0	17	20	64	12	0	96	2	0	4	0	6	178	0
14:15	9	36	17	0	62	21	0	4	0	25	22	47	14	0	83	6	0	15	0	21	191	0
14:30	1	56	6	0	63	8	0	2	0	10	8	66	11	1	86	29	0	39	0	68	227	1
14:45	5	76	3	0	84	13	0	5	0	18	4	86	19	0	109	7	0	5	0	12	223	0
Total	17	218	33	0	268	56	0	14	0	70	54	263	56	1	374	44	0	63	0	107	819	1
15:00	11	104	9	0	124	21	0	2	0	23	12	132	19	0	163	12	0	9	0	21	331	0
15:15	6	117	21	0	144	21	0	4	0	25	21	131	30	0	182	16	0	30	0	46	397	0
15:30	2	147	32	0	181	21	0	9	0	30	5	148	22	0	175	9	0	10	0	19	405	0
15:45	1	108	11	0	120	26	0	2	0	28	9	130	20	0	159	10	0	6	0	16	323	0
Total	20	476	73	0	569	89	0	17	0	106	47	541	91	0	679	47	0	55	0	102	1456	0
16:00	4	76	6	0	86	17	0	2	0	19	4	169	27	0	200	9	0	3	0	12	317	0
16:15	4	62	9	0	75	10	0	3	0	13	4	162	18	0	184	9	0	7	0	16	288	0
16:30	7	79	7	0	93	11	0	8	0	19	3	172	21	0	196	3	0	8	0	11	319	0
16:45	7	77	8	0	92	16	0	9	0	25	9	188	23	0	220	5	0	4	0	9	346	0
Total	22	294	30	0	346	54	0	22	0	76	20	691	89	0	800	26	0	22	0	48	1270	0
17:00	6	73	9	0	88	15	0	3	0	18	9	215	19	0	243	11	0	6	0	17	366	0
17:15	5	105	7	0	117	15	0	4	0	19	10	224	27	0	261	9	0	5	0	14	411	0
17:30	8	102	5	0	115	11	0	3	0	14	4	199	20	0	223	3	0	6	0	9	361	0
17:45	4	79	9	0	92	8	0	3	0	11	12	155	22	0	189	3	0	2	0	5	297	0
Total	23	359	30	0	412	49	0	13	0	62	35	793	88	0	916	26	0	19	0	45	1435	0
Grand Total	99	2212	301	0	2612	435	0	135	0	570	297	3333	380	1	4011	258	0	237	0	495	7688	1
Apprch %	3.8%	84.7%	11.5%	0.0%		76.3%	0.0%	23.7%	0.0%		7.4%	83.1%	9.5%	0.0%		52.1%	0.0%	47.9%	0.0%			
Total %	1.3%	28.8%	3.9%	0.0%	34.0%	5.7%	0.0%	1.8%	0.0%	7.4%	3.9%	43.4%	4.9%	0.0%	52.2%	3.4%	0.0%	3.1%	0.0%	6.4%	100.0%	

AM PEAK HOUR	Green Valley Rd Southbound					Cameo Dr/Blemer Rd Westbound					Green Valley Rd Northbound					Cameo Dr/Blemer Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
7:15	3	162	15	0	180	21	0	11	0	32	9	225	3	0	237	15	0	4	0	19	468
7:30	3	108	29	0	140	24	0	14	0	38	35	58	7	0	100	12	0	16	0	28	306
7:45	1	71	48	0	120	32	0	7	0	39	61	94	9	0	164	41	0	43	0	84	407
8:00	2	88	7	0	97	18	0	5	0	23	9	205	4	0	218	18	0	7	0	25	363
Total Volume	9	429	99	0	537	95	0	37	0	132	114	582	23	0	719	86	0	70	0	156	1544
% App Total	1.7%	79.9%	18.4%	0.0%		72.0%	0.0%	28.0%	0.0%		15.9%	80.9%	3.2%	0.0%		55.1%	0.0%	44.9%	0.0%		
PHF	.750	.662	.516	.000	.746	.742	.000	.661	.000	.846	.467	.647	.639	.000	.758	.524	.000	.407	.000	.464	.825

NOON PEAK	Green Valley Rd Southbound					Cameo Dr/Blemer Rd Westbound					Green Valley Rd Northbound					Cameo Dr/Blemer Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	11	104	9	0	124	21	0	2	0	23	12	132	19	0	163	12	0	9	0	21	331
15:15	6	117	21	0	144	21	0	4	0	25	21	131	30	0	182	16	0	30	0	46	397
15:30	2	147	32	0	181	21	0	9	0	30	5	148	22	0	175	9	0	10	0	19	405
15:45	1	108	11	0	120	26	0	2	0	28	9	130	20	0	159	10	0	6	0	16	323
Total Volume	20	476	73	0	569	89	0	17	0	106	47	541	91	0	679	47	0	55	0	102	1456
% App Total	3.5%	83.7%	12.8%	0.0%		84.0%	0.0%	16.0%	0.0%		6.9%	79.7%	13.4%	0.0%		46.1%	0.0%	53.9%	0.0%		
PHF	.455	.810	.570	.000	.786	.856	.000	.472	.000	.883	.560	.914	.758	.000	.933	.734	.000	.458	.000	.554	.899

PM PEAK HOUR	Green Valley Rd Southbound					Cameo Dr/Blemer Rd Westbound					Green Valley Rd Northbound					Cameo Dr/Blemer Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	7	77	8	0	92	16	0	9	0	25	9	188	23	0	220	5	0	4	0	9	346
17:00	6	73	9	0	88	15	0	3	0	18	9	215	19	0	243	11	0	6	0	17	366
17:15	5	105	7	0	117	15	0	4	0	19	10	224	27	0	261	9	0	5	0	14	411
17:30	8	102	5	0	115	11	0	3	0	14	4	199	20	0	223	3	0	6	0	9	361
Total Volume	26	357	29	0	412	57	0	19	0	76	32	826	89	0	947	28	0	21	0	49	1484
% App Total	6.3%	86.7%	7.0%	0.0%		75.0%	0.0%	25.0%	0.0%		3.4%	87.2%	9.4%	0.0%		57.1%	0.0%	42.9%	0.0%		
PHF	.813	.850	.806	.000	.880	.891	.000	.528	.000	.760	.800	.922	.824	.000	.907	.636	.000	.875	.000	.721	.903

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-005 Green Valley Rd & Cameo Dr
Date : 3/30/2017

Bank 1 Count = Bikes & Peds

	Green Valley Rd Southbound					Cameo Dr/Blemer Rd Westbound					Green Valley Rd Northbound					Cameo Dr/Blemer Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
7:15	0	2	0	0	2	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4	0
7:30	0	1	5	0	6	4	0	0	1	4	0	0	1	14	1	0	0	0	3	0	11	18
7:45	0	0	1	1	1	1	0	0	1	1	0	1	0	4	1	0	0	0	0	0	3	6
Total	1	4	6	1	11	7	0	0	2	7	0	1	1	18	2	0	0	0	3	0	20	24
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	10
8:15	1	0	2	1	3	2	0	0	0	2	0	0	0	4	0	0	0	0	1	0	5	6
8:30	0	1	0	0	1	1	0	1	0	2	0	0	0	3	0	0	0	0	2	0	3	5
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	3
Total	1	1	2	1	4	3	0	1	0	4	0	0	0	19	0	0	0	0	4	0	8	24
14:00	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	0
14:15	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0
14:30	0	0	0	20	0	0	0	0	5	0	0	0	4	8	4	4	0	0	7	4	8	40
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	4
Total	1	1	0	20	2	0	0	1	5	1	0	1	4	10	5	4	0	0	9	4	12	44
15:00	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
15:15	0	0	2	9	2	1	0	0	0	1	0	0	1	12	1	1	0	1	5	2	6	26
15:30	0	0	0	1	0	1	0	0	0	1	0	0	16	4	16	21	0	0	0	21	38	5
15:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	2	0
Total	1	1	2	10	4	2	0	0	0	2	0	0	18	16	18	23	0	1	5	24	48	31
16:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:15	0	2	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2	2
16:30	1	1	0	0	2	1	0	0	0	1	0	0	0	1	0	0	0	0	2	0	3	3
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
Total	1	4	0	0	5	1	0	0	0	1	0	0	0	2	0	0	0	0	6	0	6	8
17:00	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0
17:15	0	1	4	0	5	4	0	0	0	4	0	1	0	1	1	0	0	0	1	0	10	2
17:30	2	0	11	0	13	11	0	4	0	15	0	1	0	1	1	0	0	1	2	1	30	3
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Total	2	1	16	0	19	16	0	4	0	20	0	2	0	2	2	0	0	1	5	1	42	7
Grand Total	7	12	26	32	45	29	0	6	7	35	0	4	23	67	27	27	0	2	32	29	136	138
Apprch %	15.6%	26.7%	57.8%			82.9%	0.0%	17.1%			0.0%	14.8%	85.2%			93.1%	0.0%	6.9%				
Total %	5.1%	8.8%	19.1%		33.1%	21.3%	0.0%	4.4%		25.7%	0.0%	2.9%	16.9%		19.9%	19.9%	0.0%	1.5%		21.3%	100.0%	

AM PEAK HOUR	Green Valley Rd Southbound					Cameo Dr/Blemer Rd Westbound					Green Valley Rd Northbound					Cameo Dr/Blemer Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
7:15	0	2	0	0	2	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
7:30	0	1	5	0	6	4	0	0	1	4	0	0	1	14	1	0	0	0	3	0	11
7:45	0	0	1	1	1	1	0	0	1	1	0	1	0	4	1	0	0	0	0	0	3
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0
Total Volume	0	3	6	1	9	7	0	0	2	7	0	1	1	28	2	0	0	0	3	0	18
% App Total	0.0%	33.3%	66.7%			100.0%	0.0%	0.0%			0.0%	50.0%	50.0%			0.0%	0.0%	0.0%			
PHF	.000	.375	.300		.375	.438	.000	.000		.438	.000	.250	.250		.500	.000	.000	.000		.000	.409

NOON PEAK	Green Valley Rd Southbound					Cameo Dr/Blemer Rd Westbound					Green Valley Rd Northbound					Cameo Dr/Blemer Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
15:15	0	0	2	9	2	1	0	0	0	1	0	0	1	12	1	1	0	1	5	2	6
15:30	0	0	0	1	0	1	0	0	0	1	0	0	16	4	16	21	0	0	0	21	38
15:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	2
Total Volume	1	1	2	10	4	2	0	0	0	2	0	0	18	16	18	23	0	1	5	24	48
% App Total	25.0%	25.0%	50.0%			100.0%	0.0%	0.0%			0.0%	0.0%	100.0%			95.8%	0.0%	4.2%			
PHF	.250	.250	.250		.500	.500	.000	.000		.500	.000	.000	.281		.281	.274	.000	.250		.286	.316

PM PEAK HOUR	Green Valley Rd Southbound					Cameo Dr/Blemer Rd Westbound					Green Valley Rd Northbound					Cameo Dr/Blemer Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
17:00	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
17:15	0	1	4	0	5	4	0	0	0	4	0	1	0	1	1	0	0	0	1	0	10
17:30	2	0	11	0	13	11	0	4	0	15	0	1	0	1	1	0	0	1	2	1	30
Total Volume	2	1	16	0	19	16	0	4	0	20	0	2	0	2	2	0	0	1	6	1	42
% App Total	10.5%	5.3%	84.2%			80.0%	0.0%	20.0%			0.0%	100.0%	0.0%			0.0%	0.0%	100.0%			
PHF	.250	.250	.364		.365	.364	.000	.250		.333	.000	.500	.000		.500	.000	.000	.250		.250	.350

Green Valley Rd & Cameo Dr

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-005

Peak Hour Summary	
AM Peak Hour	07:15 - 08:15
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	16:45 - 17:45

Southbound Approach

Green Valley Rd

AM	99	429	9	0	705	AM
NOON	73	476	20	0	605	NOON
PM	29	357	26	0	873	PM

Eastbound Approach

Cameo Dr/Blemer Rd

	AM	NOON	PM
	213	120	61
	0	0	0
	86	47	28
	0	0	0
	70	55	21
	AM	NOON	PM

Westbound Approach

	AM	NOON	PM
	37	17	19
	0	0	0
	95	89	57
	0	0	0
	32	111	115
	AM	NOON	PM

CONTROL

Northbound Approach

AM	594	0	114	582	23	AM
NOON	620	0	47	541	91	NOON
PM	435	0	32	826	89	PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	537	705	AM
	569	605	NOON
	412	873	PM

West Leg			East Leg		
AM	NOON	PM			
213	120	61	132	106	76
156	102	49	32	111	115
			AM	NOON	PM

	South Leg	
AM	594	719
NOON	620	679
PM	435	947

Total Volume Per Leg

	North Leg
AM	1242
NOON	1174
PM	1285

West Leg			East Leg		
AM	NOON	PM			
369	222	110	164	217	191
			AM	NOON	PM

	South Leg
AM	1313
NOON	1299
PM	1382

Green Valley Rd & Cameo Dr

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-005

AM Peak Hour	07:15 - 08:15
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	16:45 - 17:45

Peak Hour Summary

Southbound Approach

Green Valley Rd

AM	6	3	0	0	1	AM
NOON	2	1	1	0	23	NOON
PM	16	1	2	0	6	PM

Eastbound Approach

Cameo Dr/Blemer Rd

	AM	NOON	PM
	6	2	16
	0	0	0
	0	23	0
	0	0	0
	0	1	1
	AM	NOON	PM

Westbound Approach

	AM	NOON	PM
	0	0	4
	0	0	0
	7	2	16
	0	0	0
	1	19	2
	AM	NOON	PM

CONTROL

Northbound Approach

AM	10	0	0	1	1	AM
NOON	4	0	0	0	18	NOON
PM	18	0	0	2	0	PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	9	1	AM
	4	23	NOON
	19	6	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
6	2	16		7	2	20
0	24	1		1	19	2

	South Leg	
AM	10	2
NOON	4	18
PM	18	2

Total Volume Per Leg

	North Leg
AM	10
NOON	27
PM	25

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
6	26	17	8	21	22

	South Leg
AM	12
NOON	22
PM	20

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-006 Green Valley Rd & Stone Valley Rd
Date : 3/30/2017

Unshifted Count = All Vehicles & Uturns

	Green Valley Rd Southbound					Stone Valley Rd Westbound					Green Valley Rd Northbound					Stone Valley Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	4	5	0	9	9	27	0	0	36	136	0	3	0	139	5	6	84	0	95	279	0
7:15	1	2	13	0	16	13	32	0	0	45	268	0	4	0	272	10	18	172	2	202	535	2
7:30	0	12	5	0	17	24	23	0	0	47	92	0	4	0	96	3	14	100	1	118	278	1
7:45	0	7	5	0	12	21	26	0	0	47	124	9	11	0	144	2	10	72	1	85	288	1
Total	1	25	28	0	54	67	108	0	0	175	620	9	22	0	651	20	48	428	4	500	1380	4
8:00	2	4	5	0	11	24	20	1	0	45	226	1	9	0	236	3	11	68	0	82	374	0
8:15	0	8	6	0	14	31	34	0	0	65	245	0	6	0	251	5	12	140	2	159	489	2
8:30	0	6	6	0	12	23	36	0	0	59	92	3	12	0	107	9	30	95	0	134	312	0
8:45	0	7	1	0	8	32	24	1	0	57	55	7	10	0	72	3	15	42	0	60	197	0
Total	2	25	18	0	45	110	114	2	0	226	618	11	37	0	666	20	68	345	2	435	1372	2
14:00	2	4	7	0	13	14	11	1	0	26	35	7	16	0	58	6	15	36	0	57	154	0
14:15	0	7	4	0	11	9	20	1	0	30	46	3	12	0	61	9	17	47	0	73	175	0
14:30	1	6	3	0	10	13	14	0	0	27	64	9	14	0	87	7	21	49	0	77	201	0
14:45	1	7	2	0	10	20	12	1	0	33	77	2	21	0	100	7	19	58	0	84	227	0
Total	4	24	16	0	44	56	57	3	0	116	222	21	63	0	306	29	72	190	0	291	757	0
15:00	1	1	8	0	10	19	25	0	1	45	99	3	29	0	131	8	19	115	1	143	329	2
15:15	1	9	7	0	17	13	20	1	0	34	122	6	22	0	150	11	33	187	0	231	432	0
15:30	0	0	8	0	8	8	29	0	0	37	135	5	32	0	172	3	26	113	0	142	359	0
15:45	0	1	8	0	9	22	20	0	0	42	129	4	9	0	142	8	17	95	0	120	313	0
Total	2	11	31	0	44	62	94	1	1	158	485	18	92	0	595	30	95	510	1	636	1433	2
16:00	0	2	3	0	5	9	12	0	0	21	146	2	20	0	168	5	19	79	0	103	297	0
16:15	0	8	7	0	15	14	13	1	0	28	160	3	16	0	179	6	12	51	1	70	292	1
16:30	0	2	8	0	10	13	22	0	0	35	158	3	17	0	178	2	24	83	0	109	332	0
16:45	0	0	4	0	4	21	28	1	0	50	183	2	23	0	208	4	17	69	0	90	352	0
Total	0	12	22	0	34	57	75	2	0	134	647	10	76	0	733	17	72	282	1	372	1273	1
17:00	0	3	10	0	13	16	16	1	0	33	188	4	23	0	215	4	15	81	1	101	362	1
17:15	0	2	8	0	10	23	10	1	0	34	210	9	13	0	232	3	22	100	1	126	402	1
17:30	0	3	1	0	4	19	9	0	0	28	177	3	19	0	199	4	28	88	1	121	352	1
17:45	0	3	4	0	7	13	19	0	0	32	122	2	19	0	143	5	14	76	0	95	277	0
Total	0	11	23	0	34	71	54	2	0	127	697	18	74	0	789	16	79	345	3	443	1393	3
Grand Total	9	108	138	0	255	423	502	10	1	936	3289	87	364	0	3740	132	434	2100	11	2677	7608	12
Apprch %	3.5%	42.4%	54.1%	0.0%		45.2%	53.6%	1.1%	0.1%		87.9%	2.3%	9.7%	0.0%		4.9%	16.2%	78.4%	0.4%			
Total %	0.1%	1.4%	1.8%	0.0%	3.4%	5.6%	6.6%	0.1%	0.0%	12.3%	43.2%	1.1%	4.8%	0.0%	49.2%	1.7%	5.7%	27.6%	0.1%	35.2%	100.0%	

AM PEAK HOUR	Green Valley Rd Southbound					Stone Valley Rd Westbound					Green Valley Rd Northbound					Stone Valley Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
7:15	1	2	13	0	16	13	32	0	0	45	268	0	4	0	272	10	18	172	2	202	535
7:30	0	12	5	0	17	24	23	0	0	47	92	0	4	0	96	3	14	100	1	118	278
7:45	0	7	5	0	12	21	26	0	0	47	124	9	11	0	144	2	10	72	1	85	288
8:00	2	4	5	0	11	24	20	1	0	45	226	1	9	0	236	3	11	68	0	82	374
Total Volume	3	25	28	0	56	82	101	1	0	184	710	10	28	0	748	18	53	412	4	487	1475
% App Total	5.4%	44.6%	50.0%	0.0%		44.6%	54.9%	0.5%	0.0%		94.9%	1.3%	3.7%	0.0%		3.7%	10.9%	84.6%	0.8%		
PHF	.375	.521	.538	.000	.824	.854	.789	.250	.000	.979	.662	.278	.636	.000	.688	.450	.736	.599	.500	.603	.689

NOON PEAK	Green Valley Rd Southbound					Stone Valley Rd Westbound					Green Valley Rd Northbound					Stone Valley Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	1	1	8	0	10	19	25	0	1	45	99	3	29	0	131	8	19	115	1	143	329
15:15	1	9	7	0	17	13	20	1	0	34	122	6	22	0	150	11	33	187	0	231	432
15:30	0	0	8	0	8	8	29	0	0	37	135	5	32	0	172	3	26	113	0	142	359
15:45	0	1	8	0	9	22	20	0	0	42	129	4	9	0	142	8	17	95	0	120	313
Total Volume	2	11	31	0	44	62	94	1	1	158	485	18	92	0	595	30	95	510	1	636	1433
% App Total	4.5%	25.0%	70.5%	0.0%		39.2%	59.5%	0.6%	0.6%		81.5%	3.0%	15.5%	0.0%		4.7%	14.9%	80.2%	0.2%		
PHF	.500	.306	.969	.000	.647	.705	.810	.250	.250	.878	.898	.750	.719	.000	.865	.682	.720	.682	.250	.688	.829

PM PEAK HOUR	Green Valley Rd Southbound					Stone Valley Rd Westbound					Green Valley Rd Northbound					Stone Valley Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	4	0	4	21	28	1	0	50	183	2	23	0	208	4	17	69	0	90	352
17:00	0	3	10	0	13	16	16	1	0	33	188	4	23	0	215	4	15	81	1	101	362
17:15	0	2	8	0	10	23	10	1	0	34	210	9	13	0	232	3	22	100	1	126	402
17:30	0	3	1	0	4	19	9	0	0	28	177	3	19	0	199	4	28	88	1	121	352
Total Volume	0	8	23	0	31	79	63	3	0	145	758	18	78	0	854	15	82	338	3	438	1468
% App Total	0.0%	25.8%	74.2%	0.0%		54.5%	43.4%	2.1%	0.0%		88.8%	2.1%	9.1%	0.0%		3.4%	18.7%	77.2%	0.7%		
PHF	.000	.667	.575	.000	.596	.859	.563	.750	.000	.725	.902	.500	.848	.000	.920	.938	.732	.845	.750	.869	.913

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-006 Green Valley Rd & Stone Valley Rd
Date : 3/30/2017

Bank 1 Count = Bikes & Peds

	Green Valley Rd Southbound					Stone Valley Rd Westbound					Green Valley Rd Northbound					Stone Valley Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
7:30	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	1	2
7:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	2	0	1	0	0	1	1	0	0	0	5	0	0	0	0	0	0	1	8
8:00	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	1	1	4
8:30	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	0	1	2
8:45	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	0	1	2	1	1	0	0	7	1	0	0	1	0	1	3	9
14:00	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	1	0	1	2	1
14:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0
14:30	0	0	0	1	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	6
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0
Total	0	0	0	1	0	0	1	0	0	1	1	0	0	6	1	0	0	2	0	2	4	7
15:00	0	0	0	1	0	0	0	0	0	0	0	0	0	11	0	0	0	2	0	2	2	12
15:15	0	0	0	3	0	0	0	0	2	0	0	1	0	9	1	0	0	0	0	0	1	14
15:30	0	1	0	0	1	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	2	1
15:45	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	2	0
Total	0	1	0	4	1	0	1	0	2	1	2	1	0	21	3	0	0	2	0	2	7	27
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0
16:15	0	1	1	0	2	0	0	0	0	0	0	0	0	1	0	0	0	3	0	3	5	1
16:30	0	0	1	4	1	0	0	0	0	0	0	0	0	2	0	1	0	0	0	1	2	6
16:45	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
Total	0	1	2	4	3	0	0	0	1	0	0	0	0	4	0	1	0	4	0	5	8	9
17:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
17:15	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	1	2
17:30	0	0	0	0	0	0	2	0	0	2	2	0	0	2	2	0	0	1	0	1	5	2
17:45	0	0	0	0	0	0	0	0	1	0	0	2	1	2	3	1	0	0	0	1	4	3
Total	0	0	0	2	0	0	2	0	2	2	2	2	1	5	5	1	0	2	0	3	10	9
Grand Total	0	2	2	13	4	1	4	1	8	6	6	3	1	48	10	2	0	11	0	13	33	69
Apprch %	0.0%	50.0%	50.0%			16.7%	66.7%	16.7%			60.0%	30.0%	10.0%			15.4%	0.0%	84.6%				
Total %	0.0%	6.1%	6.1%		12.1%	3.0%	12.1%	3.0%		18.2%	18.2%	9.1%	3.0%		30.3%	6.1%	0.0%	33.3%		39.4%	100.0%	

AM PEAK HOUR	Green Valley Rd Southbound					Stone Valley Rd Westbound					Green Valley Rd Northbound					Stone Valley Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
7:30	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	1
7:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
Total Volume	0	0	0	1	0	1	0	0	1	1	0	0	0	6	0	0	0	0	0	0	1
% App Total	0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.250	.000	.000		.250	.000	.000	.000		.000	.000	.000	.000		.000	.250

NOON PEAK	Green Valley Rd Southbound					Stone Valley Rd Westbound					Green Valley Rd Northbound					Stone Valley Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	0	0	0	1	0	0	0	0	0	0	0	0	0	11	0	0	0	2	0	2	2
15:15	0	0	0	3	0	0	0	0	2	0	0	1	0	9	1	0	0	0	0	0	1
15:30	0	1	0	0	1	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	2
15:45	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	2
Total Volume	0	1	0	4	1	0	1	0	2	1	2	1	0	21	3	0	0	2	0	2	7
% App Total	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			66.7%	33.3%	0.0%			0.0%	0.0%	100.0%			
PHF	.000	.250	.000		.250	.000	.250	.000		.250	.250	.250	.000		.375	.000	.000	.250		.250	.875

PM PEAK HOUR	Green Valley Rd Southbound					Stone Valley Rd Westbound					Green Valley Rd Northbound					Stone Valley Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
17:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
17:15	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	1
17:30	0	0	0	0	0	0	2	0	0	2	2	0	0	2	2	0	0	1	0	1	5
Total Volume	0	0	0	2	0	0	2	0	2	2	2	0	0	4	2	0	0	2	0	2	6
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			100.0%	0.0%	0.0%			0.0%	0.0%	100.0%			
PHF	.000	.000	.000		.000	.000	.250	.000		.250	.250	.000	.000		.250	.000	.000	.500		.500	.300

Green Valley Rd & Stone Valley Rd

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-006

Peak Hour Summary	
AM Peak Hour	07:15 - 08:15
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	16:45 - 17:45

Southbound Approach

Green Valley Rd

AM	28	25	3	0	29	AM
NOON	31	11	2	0	49	NOON
PM	23	8	0	0	36	PM

Eastbound Approach

Stone Valley Rd

AM	NOON	PM
843	611	847
4	1	3
18	30	15
53	95	82
412	510	338
AM	NOON	PM

Westbound Approach

AM	NOON	PM
1	1	3
101	94	63
82	62	79
0	1	0
84	190	160
AM	NOON	PM

CONTROL

Northbound Approach

AM	519	0	710	10	28	AM
NOON	583	0	485	18	92	NOON
PM	425	0	758	18	78	PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	56	29	AM
	44	49	NOON
	31	36	PM

West Leg				East Leg		
AM	NOON	PM				
843	611	847		184	158	145
487	636	438		84	190	160
				AM	NOON	PM

South Leg		
AM	519	748
NOON	583	595
PM	425	854

Total Volume Per Leg

North Leg	
85	AM
93	NOON
67	PM

West Leg			East Leg		
AM	NOON	PM			
1330	1247	1285	268	348	305
			AM	NOON	PM

South Leg	
AM	1267
NOON	1178
PM	1279

Green Valley Rd & Stone Valley Rd

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-006

Peak Hour Summary	
AM Peak Hour	07:15 - 08:15
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	16:45 - 17:45

Southbound Approach

Green Valley Rd

AM	0	0	0	0	0	AM
NOON	0	1	0	0	1	NOON
PM	0	0	0	0	0	PM

Eastbound Approach

Stone Valley Rd

AM	NOON	PM
0	3	4
0	0	0
0	0	0
0	0	0
0	2	2
AM	NOON	PM

Westbound Approach

AM	NOON	PM
0	0	0
0	1	2
1	0	0
0	0	0
0	0	0
AM	NOON	PM

CONTROL

Northbound Approach

AM	1	0	0	0	0	AM
NOON	3	0	2	1	0	NOON
PM	2	0	2	0	0	PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	0	0	AM
	1	1	NOON
	0	0	PM

West Leg			East Leg		
AM	NOON	PM			
0	3	4	1	1	2
0	2	2	0	0	0
			AM	NOON	PM

	South Leg	
AM	1	0
NOON	3	3
PM	2	2

Total Volume Per Leg

	North Leg	
	0	AM
	2	NOON
	0	PM

West Leg			East Leg		
AM	NOON	PM			
0	5	6	1	1	2
			AM	NOON	PM

	South Leg
AM	1
NOON	6
PM	4

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-007 Monte Vista H.S Main Parking lot Entrance & Stone Va
Date : 3/30/2017

Unshifted Count = All Vehicles & Uturns

	Monte Vista H.S Main Parking lot Entrance Southbound					Stone Valley Rd Westbound					Monte Vista H.S Main Parking lot Entrance Northbound					Stone Valley Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	2	0	0	0	2	34	55	18	0	107	6	0	3	0	9	3	58	17	0	78	196	0
7:15	2	0	1	0	3	82	60	31	0	173	42	0	7	0	49	10	70	73	0	153	378	0
7:30	1	1	0	0	2	27	86	12	0	125	36	1	3	0	40	3	81	27	0	111	278	0
7:45	0	0	0	0	0	32	90	11	0	133	5	1	2	0	8	6	62	19	0	87	228	0
Total	5	1	1	0	7	175	291	72	0	538	89	2	15	0	106	22	271	136	0	429	1080	0
8:00	1	0	0	0	1	74	67	55	0	196	15	0	1	0	16	20	60	30	0	110	323	0
8:15	0	0	0	0	0	66	86	80	0	232	30	2	5	0	37	26	76	49	0	151	420	0
8:30	1	0	1	0	2	11	87	19	0	117	25	3	3	0	31	10	76	24	0	110	260	0
8:45	0	0	0	0	0	3	62	6	0	71	3	0	2	0	5	1	52	9	0	62	138	0
Total	2	0	1	0	3	154	302	160	0	616	73	5	11	0	89	57	264	112	0	433	1141	0
14:00	0	0	0	0	0	7	44	0	0	51	4	0	4	0	8	1	48	4	0	53	112	0
14:15	1	2	0	0	3	9	54	0	0	63	13	0	7	0	20	0	62	3	0	65	151	0
14:30	5	0	1	0	6	8	71	1	0	80	4	0	4	0	8	0	64	8	0	72	166	0
14:45	4	0	1	0	5	18	57	2	0	77	6	1	11	0	18	2	69	13	0	84	184	0
Total	10	2	2	0	14	42	226	3	0	271	27	1	26	0	54	3	243	28	0	274	613	0
15:00	20	2	3	0	25	29	75	3	1	108	35	1	29	0	65	6	79	14	0	99	297	1
15:15	53	10	39	0	102	22	148	2	0	172	64	2	31	0	97	2	66	13	0	81	452	0
15:30	14	3	3	0	20	15	138	0	0	153	22	0	20	0	42	2	66	9	0	77	292	0
15:45	10	0	2	0	12	9	136	2	0	147	14	0	10	0	24	0	63	7	0	70	253	0
Total	97	15	47	0	159	75	497	7	1	580	135	3	90	0	228	10	274	43	0	327	1294	1
16:00	4	1	1	0	6	10	149	1	0	160	13	0	8	0	21	0	78	5	0	83	270	0
16:15	3	1	2	0	6	16	173	2	0	191	10	1	9	0	20	1	53	5	0	59	276	0
16:30	3	2	0	0	5	9	161	1	0	171	6	0	6	0	12	0	88	6	0	94	282	0
16:45	0	0	0	0	0	21	197	0	0	218	1	0	8	0	9	0	70	4	0	74	301	0
Total	10	4	3	0	17	56	680	4	0	740	30	1	31	0	62	1	289	20	0	310	1129	0
17:00	2	0	0	0	2	32	189	0	0	221	8	2	24	0	34	0	73	12	0	85	342	0
17:15	12	0	4	0	16	44	181	0	0	225	25	3	48	0	76	1	62	19	0	82	399	0
17:30	4	0	4	0	8	26	167	1	0	194	18	1	41	0	60	0	70	10	0	80	342	0
17:45	0	0	0	0	0	18	126	0	0	144	10	0	37	0	47	0	54	7	0	61	252	0
Total	18	0	8	0	26	120	663	1	0	784	61	6	150	0	217	1	259	48	0	308	1335	0
Grand Total	142	22	62	0	226	622	2659	247	1	3529	415	18	323	0	756	94	1600	387	0	2081	6592	1
Apprch %	62.8%	9.7%	27.4%	0.0%		17.6%	75.3%	7.0%	0.0%		54.9%	2.4%	42.7%	0.0%		4.5%	76.9%	18.6%	0.0%			
Total %	2.2%	0.3%	0.9%	0.0%	3.4%	9.4%	40.3%	3.7%	0.0%	53.5%	6.3%	0.3%	4.9%	0.0%	11.5%	1.4%	24.3%	5.9%	0.0%	31.6%	100.0%	

AM PEAK HOUR	Monte Vista H.S Main Parking lot Entrance Southbound					Stone Valley Rd Westbound					Monte Vista H.S Main Parking lot Entrance Northbound					Stone Valley Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	1	1	0	0	2	27	86	12	0	125	36	1	3	0	40	3	81	27	0	111	278
7:45	0	0	0	0	0	32	90	11	0	133	5	1	2	0	8	6	62	19	0	87	228
8:00	1	0	0	0	1	74	67	55	0	196	15	0	1	0	16	20	60	30	0	110	323
8:15	0	0	0	0	0	66	86	80	0	232	30	2	5	0	37	26	76	49	0	151	420
Total Volume	2	1	0	0	3	199	329	158	0	686	86	4	11	0	101	55	279	125	0	459	1249
% App Total	66.7%	33.3%	0.0%	0.0%		29.0%	48.0%	23.0%	0.0%		85.1%	4.0%	10.9%	0.0%		12.0%	60.8%	27.2%	0.0%		
PHF	.500	.250	.000	.000	.375	.672	.914	.494	.000	.739	.597	.500	.550	.000	.631	.529	.861	.638	.000	.760	.743

NOON PEAK	Monte Vista H.S Main Parking lot Entrance Southbound					Stone Valley Rd Westbound					Monte Vista H.S Main Parking lot Entrance Northbound					Stone Valley Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	20	2	3	0	25	29	75	3	1	108	35	1	29	0	65	6	79	14	0	99	297
15:15	53	10	39	0	102	22	148	2	0	172	64	2	31	0	97	2	66	13	0	81	452
15:30	14	3	3	0	20	15	138	0	0	153	22	0	20	0	42	2	66	9	0	77	292
15:45	10	0	2	0	12	9	136	2	0	147	14	0	10	0	24	0	63	7	0	70	253
Total Volume	97	15	47	0	159	75	497	7	1	580	135	3	90	0	228	10	274	43	0	327	1294
% App Total	61.0%	9.4%	29.6%	0.0%		12.9%	85.7%	1.2%	0.2%		59.2%	1.3%	39.5%	0.0%		3.1%	83.8%	13.1%	0.0%		
PHF	.458	.375	.301	.000	.390	.647	.840	.583	.250	.843	.527	.375	.726	.000	.588	.417	.867	.768	.000	.826	.716

PM PEAK HOUR	Monte Vista H.S Main Parking lot Entrance Southbound					Stone Valley Rd Westbound					Monte Vista H.S Main Parking lot Entrance Northbound					Stone Valley Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	21	197	0	0	218	1	0	8	0	9	0	70	4	0	74	301
17:00	2	0	0	0	2	32	189	0	0	221	8	2	24	0	34	0	73	12	0	85	342
17:15	12	0	4	0	16	44	181	0	0	225	25	3	48	0	76	1	62	19	0	82	399
17:30	4	0	4	0	8	26	167	1	0	194	18	1	41	0	60	0	70	10	0	80	342
Total Volume	18	0	8	0	26	123	734	1	0	858	52	6	121	0	179	1	275	45	0	321	1384
% App Total	69.2%	0.0%	30.8%	0.0%		14.3%	85.5%	0.1%	0.0%		29.1%	3.4%	67.6%	0.0%		0.3%	85.7%	14.0%	0.0%		
PHF	.375	.000	.500	.000	.406	.699	.931	.250	.000	.953	.520	.500	.630	.000	.589	.250	.942	.592	.000	.944	.867

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-007 Monte Vista H.S Main Parking lot Entrance & Stone Va
Date : 3/30/2017

Bank 1 Count = Bikes & Peds

	Monte Vista H.S Main Parking lot Entrance Southbound					Stone Valley Rd Westbound					Monte Vista H.S Main Parking lot Entrance Northbound					Stone Valley Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	2	1	0	3	3	7
7:15	0	1	0	3	1	0	0	0	63	0	0	0	0	2	0	0	0	0	0	0	1	68
7:30	0	0	0	1	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	14
7:45	0	0	0	0	0	0	0	0	10	0	1	0	0	2	1	0	0	0	0	0	1	12
Total	0	1	0	4	1	0	0	0	93	0	1	0	0	4	1	0	2	1	0	3	5	101
8:00	0	0	0	1	0	0	0	0	19	0	0	0	0	1	0	0	0	0	0	0	0	21
8:15	0	0	0	5	0	0	0	0	148	0	0	0	0	3	0	0	1	0	0	1	1	156
8:30	0	0	0	3	0	0	0	0	117	0	0	0	0	0	0	0	0	0	0	0	0	120
8:45	0	0	0	2	0	0	0	0	11	0	0	0	0	1	0	0	0	0	0	0	0	14
Total	0	0	0	11	0	0	0	0	295	0	0	0	0	5	0	0	1	0	0	1	1	311
14:00	0	0	0	3	0	0	1	0	8	1	0	0	0	0	0	0	1	0	0	1	2	11
14:15	0	0	0	5	0	0	1	0	7	1	0	0	0	0	0	0	0	0	0	0	1	12
14:30	0	0	0	4	0	0	0	0	5	0	0	0	0	2	0	0	0	0	0	0	0	11
14:45	0	0	0	4	0	0	0	0	7	0	0	0	0	1	0	0	1	0	0	1	1	12
Total	0	0	0	16	0	0	2	0	27	2	0	0	0	3	0	0	2	0	0	2	4	46
15:00	0	0	0	67	0	0	0	0	60	0	0	0	0	0	0	0	1	0	0	1	1	127
15:15	0	0	0	66	0	0	2	0	90	2	0	0	0	4	0	0	0	1	0	1	3	160
15:30	0	0	0	12	0	0	0	0	19	0	0	0	0	1	0	0	0	0	0	0	0	32
15:45	0	0	0	5	0	0	2	0	9	2	0	0	0	0	0	0	0	0	0	0	2	14
Total	0	0	0	150	0	0	4	0	178	4	0	0	0	5	0	0	1	1	0	2	6	333
16:00	0	0	0	3	0	0	1	0	5	1	0	0	0	0	0	0	0	0	0	0	1	8
16:15	0	0	0	2	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	2	2	5
16:30	0	0	0	1	0	0	1	0	3	1	0	0	0	0	0	0	1	0	0	1	2	4
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	6	0	0	2	0	11	2	0	0	0	0	0	0	3	0	0	3	5	17
17:00	0	0	0	0	0	0	0	0	5	0	0	0	0	1	0	0	0	0	0	0	0	6
17:15	0	0	0	4	0	0	1	0	13	1	0	0	0	1	0	0	4	0	0	4	5	18
17:30	1	0	0	4	1	0	3	1	5	4	0	0	0	3	0	0	0	0	0	0	5	12
17:45	0	0	0	2	0	0	1	0	2	1	1	0	0	1	1	0	1	0	0	1	3	5
Total	1	0	0	10	1	0	5	1	25	6	1	0	0	6	1	0	5	0	0	5	13	41
Grand Total	1	1	0	197	2	0	13	1	629	14	2	0	0	23	2	0	14	2	0	16	34	849
Apprch %	50.0%	50.0%	0.0%			0.0%	92.9%	7.1%			100.0%	0.0%	0.0%			0.0%	87.5%	12.5%				
Total %	2.9%	2.9%	0.0%		5.9%	0.0%	38.2%	2.9%		41.2%	5.9%	0.0%	0.0%		5.9%	0.0%	41.2%	5.9%		47.1%	100.0%	

AM PEAK HOUR	Monte Vista H.S Main Parking lot Entrance Southbound					Stone Valley Rd Westbound					Monte Vista H.S Main Parking lot Entrance Northbound					Stone Valley Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	0	0	1	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	10	0	1	0	0	2	1	0	0	0	0	0	1
8:00	0	0	0	1	0	0	0	0	19	0	0	0	0	1	0	0	0	0	0	0	0
8:15	0	0	0	5	0	0	0	0	148	0	0	0	0	3	0	0	1	0	0	1	1
Total Volume	0	0	0	7	0	0	0	0	190	0	1	0	0	6	1	0	1	0	0	1	2
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.250	.000	.000		.250	.000	.250	.000		.250	.500

NOON PEAK	Monte Vista H.S Main Parking lot Entrance Southbound					Stone Valley Rd Westbound					Monte Vista H.S Main Parking lot Entrance Northbound					Stone Valley Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	0	0	0	67	0	0	0	0	60	0	0	0	0	0	0	0	1	0	0	1	1
15:15	0	0	0	66	0	0	2	0	90	2	0	0	0	4	0	0	0	1	0	1	3
15:30	0	0	0	12	0	0	0	0	19	0	0	0	0	1	0	0	0	0	0	0	0
15:45	0	0	0	5	0	0	2	0	9	2	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	150	0	0	4	0	178	4	0	0	0	5	0	0	1	1	0	2	6
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	50.0%	50.0%			
PHF	.000	.000	.000		.000	.000	.500	.000		.500	.000	.000	.000		.000	.000	.250	.250		.500	.500

PM PEAK HOUR	Monte Vista H.S Main Parking lot Entrance Southbound					Stone Valley Rd Westbound					Monte Vista H.S Main Parking lot Entrance Northbound					Stone Valley Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	5	0	0	0	0	1	0	0	0	0	0	0	0
17:15	0	0	0	4	0	0	1	0	13	1	0	0	0	1	0	0	4	0	0	4	5
17:30	1	0	0	4	1	0	3	1	5	4	0	0	0	3	0	0	0	0	0	0	5
Total Volume	1	0	0	8	1	0	4	1	23	5	0	0	0	5	0	0	4	0	0	4	10
% App Total	100.0%	0.0%	0.0%			0.0%	80.0%	20.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.250	.000	.000		.250	.000	.333	.250		.313	.000	.000	.000		.000	.000	.250	.000		.250	.500

Monte Vista H.S Main Parking lot Entrance & Stone

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-007

AM Peak Hour	07:30 - 08:30
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	16:45 - 17:45

Peak Hour Summary

Southbound Approach (Monte Vista H.S Main P)

AM	0	1	2	0	217
NOON	47	15	97	0	20
PM	8	0	18	0	8

Eastbound Approach (Stone Valley Rd)

	AM	NOON	PM
	415	679	794
	0	0	0
	55	10	1
	279	274	275
	125	43	45

Westbound Approach

	AM	NOON	PM
	158	7	1
	329	497	734
	199	75	123
	0	1	0
	292	462	414

CONTROL

Northbound Approach

AM	325	0	86	4	11
NOON	133	0	135	3	90
PM	168	0	52	6	121

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg			West Leg			South Leg	
AM	3	217	686	580	858	415	679	794	325	101
NOON	159	20	292	462	414	459	327	321	133	228
PM	26	8							168	179

Total Volume Per Leg

	North Leg	East Leg			West Leg			South Leg
AM	220	978	1042	1272	874	1006	1115	426
NOON	179							361
PM	34							347

Monte Vista H.S Main Parking lot Entrance & Stone

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-007

Peak Hour Summary	
AM Peak Hour	07:30 - 08:30
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	16:45 - 17:45

Southbound Approach

Monte Vista H.S Main P

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	1	0	1	PM

Eastbound Approach

Stone Valley Rd

AM	NOON	PM
1	4	4
0	0	0
0	0	0
1	1	4
0	1	0
AM	NOON	PM

Westbound Approach

AM	NOON	PM
0	0	1
0	4	4
0	0	0
0	0	0
1	1	5
AM	NOON	PM

CONTROL

Northbound Approach

AM	0	0	1	0	0	AM
NOON	1	0	0	0	0	NOON
PM	0	0	0	0	0	PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	0	0	AM
	0	0	NOON
	1	1	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
1	4	4		0	4	5
1	2	4		1	1	5

	South Leg	
AM	0	1
NOON	1	0
PM	0	0

Total Volume Per Leg

	North Leg	
	0	AM
	0	NOON
	2	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
2	6	8		1	5	10

	South Leg
AM	1
NOON	1
PM	0

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-008 Mt. Diablo Scenic Blvd & Diablo Rd
Date : 3/30/2017

Unshifted Count = All Vehicles & Uturns

	Mt. Diablo Scenic Blvd Southbound					Diablo Rd Westbound					Mt. Diablo Scenic Blvd Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	5	0	6	0	11	0	150	6	0	156	0	0	0	0	0	15	35	0	0	50	217	0
7:15	6	0	13	0	19	0	151	1	0	152	0	0	0	0	0	25	111	0	0	136	307	0
7:30	2	0	10	0	12	0	118	7	0	125	0	0	0	0	0	22	88	0	0	110	247	0
7:45	24	0	35	0	59	0	108	38	0	146	0	0	0	0	0	69	64	0	0	133	338	0
Total	37	0	64	0	101	0	527	52	0	579	0	0	0	0	0	131	298	0	0	429	1109	0
8:00	29	0	56	0	85	0	118	25	0	143	0	0	0	0	0	82	73	0	0	155	383	0
8:15	1	0	21	0	22	0	161	9	0	170	0	0	0	0	0	13	74	0	0	87	279	0
8:30	4	0	3	0	7	0	70	2	0	72	0	0	0	0	0	14	95	0	0	109	188	0
8:45	6	0	10	0	16	0	69	3	0	72	0	0	0	0	0	7	70	0	0	77	165	0
Total	40	0	90	0	130	0	418	39	0	457	0	0	0	0	0	116	312	0	0	428	1015	0
14:00	3	0	18	0	21	0	68	9	0	77	0	0	0	0	0	19	65	0	0	84	182	0
14:15	10	0	27	0	37	0	70	5	0	75	0	0	0	0	0	14	67	0	0	81	193	0
14:30	8	0	34	0	42	0	91	9	0	100	0	0	0	0	0	14	75	0	0	89	231	0
14:45	12	0	40	0	52	0	102	6	0	108	0	0	0	0	0	19	63	0	0	82	242	0
Total	33	0	119	0	152	0	331	29	0	360	0	0	0	0	0	66	270	0	0	336	848	0
15:00	6	0	45	0	51	0	112	10	0	122	0	0	0	0	0	15	96	0	0	111	284	0
15:15	12	0	46	0	58	0	114	13	0	127	0	0	0	0	0	47	144	0	0	191	376	0
15:30	32	0	54	0	86	0	104	9	0	113	0	0	0	0	0	24	157	0	0	181	380	0
15:45	19	0	37	0	56	0	85	9	0	94	0	0	0	0	0	15	159	0	0	174	324	0
Total	69	0	182	0	251	0	415	41	0	456	0	0	0	0	0	101	556	0	0	657	1364	0
16:00	9	0	27	0	36	0	123	10	0	133	0	0	0	0	0	15	87	0	0	102	271	0
16:15	3	0	22	0	25	0	123	6	0	129	0	0	0	0	0	12	74	0	0	86	240	0
16:30	9	0	21	0	30	0	132	5	0	137	0	0	0	0	0	12	81	0	0	93	260	0
16:45	4	0	23	0	27	0	122	5	0	127	0	0	0	0	0	8	78	0	0	86	240	0
Total	25	0	93	0	118	0	500	26	0	526	0	0	0	0	0	47	320	0	0	367	1011	0
17:00	12	0	22	0	34	0	121	5	0	126	0	0	0	0	0	15	81	0	0	96	256	0
17:15	5	0	21	0	26	0	125	8	0	133	0	0	0	0	0	13	101	0	0	114	273	0
17:30	9	0	15	0	24	0	109	7	0	116	0	0	0	0	0	11	123	0	0	134	274	0
17:45	8	0	15	0	23	0	119	8	0	127	0	0	0	0	0	13	81	0	0	94	244	0
Total	34	0	73	0	107	0	474	28	0	502	0	0	0	0	0	52	386	0	0	438	1047	0
Grand Total	238	0	621	0	859	0	2665	215	0	2880	0	0	0	0	0	513	2142	0	0	2655	6394	0
Apprch %	27.7%	0.0%	72.3%	0.0%		0.0%	92.5%	7.5%	0.0%		0.0%	0.0%	0.0%	0.0%		19.3%	80.7%	0.0%	0.0%			
Total %	3.7%	0.0%	9.7%	0.0%	13.4%	0.0%	41.7%	3.4%	0.0%	45.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	33.5%	0.0%	0.0%	41.5%	100.0%	

AM PEAK HOUR	Mt. Diablo Scenic Blvd Southbound					Diablo Rd Westbound					Mt. Diablo Scenic Blvd Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
7:15	6	0	13	0	19	0	151	1	0	152	0	0	0	0	0	25	111	0	0	136	307
7:30	2	0	10	0	12	0	118	7	0	125	0	0	0	0	0	22	88	0	0	110	247
7:45	24	0	35	0	59	0	108	38	0	146	0	0	0	0	0	69	64	0	0	133	338
8:00	29	0	56	0	85	0	118	25	0	143	0	0	0	0	0	82	73	0	0	155	383
Total Volume	61	0	114	0	175	0	495	71	0	566	0	0	0	0	0	198	336	0	0	534	1275
% App Total	34.9%	0.0%	65.1%	0.0%		0.0%	87.5%	12.5%	0.0%		0.0%	0.0%	0.0%	0.0%		37.1%	62.9%	0.0%	0.0%		
PHF	.526	.000	.509	.000	.515	.000	.820	.467	.000	.931	.000	.000	.000	.000	.000	.604	.757	.000	.000	.861	.832

NOON PEAK	Mt. Diablo Scenic Blvd Southbound					Diablo Rd Westbound					Mt. Diablo Scenic Blvd Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	6	0	45	0	51	0	112	10	0	122	0	0	0	0	0	15	96	0	0	111	284
15:15	12	0	46	0	58	0	114	13	0	127	0	0	0	0	0	47	144	0	0	191	376
15:30	32	0	54	0	86	0	104	9	0	113	0	0	0	0	0	24	157	0	0	181	380
15:45	19	0	37	0	56	0	85	9	0	94	0	0	0	0	0	15	159	0	0	174	324
Total Volume	69	0	182	0	251	0	415	41	0	456	0	0	0	0	0	101	556	0	0	657	1364
% App Total	27.5%	0.0%	72.5%	0.0%		0.0%	91.0%	9.0%	0.0%		0.0%	0.0%	0.0%	0.0%		15.4%	84.6%	0.0%	0.0%		
PHF	.539	.000	.843	.000	.730	.000	.910	.788	.000	.898	.000	.000	.000	.000	.000	.537	.874	.000	.000	.860	.897

PM PEAK HOUR	Mt. Diablo Scenic Blvd Southbound					Diablo Rd Westbound					Mt. Diablo Scenic Blvd Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	12	0	22	0	34	0	121	5	0	126	0	0	0	0	0	15	81	0	0	96	256
17:15	5	0	21	0	26	0	125	8	0	133	0	0	0	0	0	13	101	0	0	114	273
17:30	9	0	15	0	24	0	109	7	0	116	0	0	0	0	0	11	123	0	0	134	274
17:45	8	0	15	0	23	0	119	8	0	127	0	0	0	0	0	13	81	0	0	94	244
Total Volume	34	0	73	0	107	0	474	28	0	502	0	0	0	0	0	52	386	0	0	438	1047
% App Total	31.8%	0.0%	68.2%	0.0%		0.0%	94.4%	5.6%	0.0%		0.0%	0.0%	0.0%	0.0%		11.9%	88.1%	0.0%	0.0%		
PHF	.708	.000	.830	.000	.787	.000	.948	.875	.000	.944	.000	.000	.000	.000	.000	.867	.785	.000	.000	.817	.955

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-008 Mt. Diablo Scenic Blvd & Diablo Rd
Date : 3/30/2017

Bank 1 Count = Bikes & Peds

	Mt. Diablo Scenic Blvd Southbound					Diablo Rd Westbound					Mt. Diablo Scenic Blvd Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	3	0
14:00	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	0
14:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	1	0	0	0	1	0	0	1	1	1	0	0	0	0	0	1	0	0	0	1	3	1
Total	1	0	1	0	2	0	0	2	2	2	0	0	0	0	0	1	0	0	0	1	5	2
15:00	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	1	0	0	0	1	4	0
15:15	0	0	0	1	0	0	2	0	0	2	0	0	0	0	0	0	2	0	1	2	4	2
15:30	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0
15:45	1	0	1	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
Total	1	0	3	1	4	0	3	2	2	5	0	0	0	0	0	1	2	0	1	3	12	4
16:00	1	0	0	0	1	0	0	2	0	2	0	0	0	0	0	1	0	0	0	1	4	0
16:15	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0
16:30	1	0	3	0	4	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	6	0
16:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Total	2	0	3	0	5	0	0	5	0	5	0	0	0	0	0	1	1	0	0	2	12	0
17:00	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	1	0	0	1	4	0
17:15	0	0	0	0	0	0	0	9	0	9	0	0	0	0	0	0	1	0	0	1	10	0
17:30	1	0	0	0	1	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	3	0
17:45	0	0	0	0	0	0	0	13	0	13	0	0	0	0	0	0	1	0	0	1	14	0
Total	1	0	0	0	1	0	1	26	0	27	0	0	0	0	0	0	3	0	0	3	31	0
Grand Total	5	0	7	1	12	0	4	35	4	39	0	0	0	0	0	4	8	0	1	12	63	6
Apprch %	41.7%	0.0%	58.3%			0.0%	10.3%	89.7%			0.0%	0.0%	0.0%			33.3%	66.7%	0.0%				
Total %	7.9%	0.0%	11.1%		19.0%	0.0%	6.3%	55.6%		61.9%	0.0%	0.0%	0.0%		0.0%	6.3%	12.7%	0.0%		19.0%	100.0%	

AM PEAK HOUR	Mt. Diablo Scenic Blvd Southbound					Diablo Rd Westbound					Mt. Diablo Scenic Blvd Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.250	.000	.000		.250	.250

NOON PEAK	Mt. Diablo Scenic Blvd Southbound					Diablo Rd Westbound					Mt. Diablo Scenic Blvd Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	1	0	0	0	1	4
15:15	0	0	0	1	0	0	2	0	0	2	0	0	0	0	0	0	2	0	1	2	4
15:30	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
15:45	1	0	1	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	1	0	3	1	4	0	3	2	2	5	0	0	0	0	0	1	2	0	1	3	12
% App Total	25.0%	0.0%	75.0%			0.0%	60.0%	40.0%			0.0%	0.0%	0.0%			33.3%	66.7%	0.0%			
PHF	.250	.000	.750		.500	.000	.375	.250		.625	.000	.000	.000		.000	.250	.250	.000		.375	.750

PM PEAK HOUR	Mt. Diablo Scenic Blvd Southbound					Diablo Rd Westbound					Mt. Diablo Scenic Blvd Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	1	0	0	1	4
17:15	0	0	0	0	0	0	0	9	0	9	0	0	0	0	0	0	1	0	0	1	10
17:30	1	0	0	0	1	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	3
17:45	0	0	0	0	0	0	0	13	0	13	0	0	0	0	0	0	1	0	0	1	14
Total Volume	1	0	0	0	1	0	1	26	0	27	0	0	0	0	0	0	3	0	0	3	31
% App Total	100.0%	0.0%	0.0%			0.0%	3.7%	96.3%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.250	.000	.000		.250	.000	.250	.500		.519	.000	.000	.000		.000	.000	.750	.000		.750	.554

Mt. Diablo Scenic Blvd & Diablo Rd

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-008

Peak Hour Summary	
AM Peak Hour	07:15 - 08:15
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	17:00 - 18:00

Southbound Approach

Mt. Diablo Scenic Blvd

AM	114	0	61	0	269
NOON	182	0	69	0	142
PM	73	0	34	0	80

Eastbound Approach

Diablo Rd

	AM	NOON	PM
	609	597	547
	0	0	0
	198	101	52
	336	556	386
	0	0	0
	AM	NOON	PM

Westbound Approach

	AM	NOON	PM
	71	41	28
	495	415	474
	0	0	0
	0	0	0
	397	625	420
	AM	NOON	PM

CONTROL

Northbound Approach

AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	0	0	0	0	0

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	175	269	AM
	251	142	NOON
	107	80	PM

West Leg				East Leg		
AM	NOON	PM				
609	597	547		566	456	502
534	657	438		397	625	420
				AM	NOON	PM

South Leg		
0	0	AM
0	0	NOON
0	0	PM

Total Volume Per Leg

North Leg	
444	AM
393	NOON
187	PM

West Leg			East Leg		
AM	NOON	PM			
1143	1254	985	963	1081	922
			AM	NOON	PM

South Leg	
0	AM
0	NOON
0	PM

Mt. Diablo Scenic Blvd & Diablo Rd

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-008

AM Peak Hour	07:15 - 08:15
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	17:00 - 18:00

Peak Hour Summary

Southbound Approach (Mt. Diablo Scenic Blvd)

AM	0	0	0	0	1
NOON	3	0	1	0	3
PM	0	0	1	0	26

Eastbound Approach (Diablo Rd)

	AM	NOON	PM
	0	6	1
	0	0	0
	1	1	0
	0	2	3
	0	0	0

Westbound Approach

	AM	NOON	PM
	0	2	26
	0	3	1
	0	0	0
	0	0	0
	0	3	4

CONTROL

Northbound Approach

AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	0	0	0	0	0

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
AM	0	1	
NOON	4	3	
PM	1	26	

West Leg	AM	NOON	PM
	0	6	1
	1	3	3

East Leg	AM	NOON	PM
	0	5	27
	0	3	4

South Leg		
AM	0	0
NOON	0	0
PM	0	0

Total Volume Per Leg

	North Leg	
AM	1	
NOON	7	
PM	27	

West Leg	AM	NOON	PM
	1	9	4

East Leg	AM	NOON	PM
	0	8	31

South Leg	
AM	0
NOON	0
PM	0

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-009 Hidden Oak Dr/Magee Ranch Rd & Blackhawk Rd
Date : 3/30/2017

Unshifted Count = All Vehicles & Uturns

	Hidden Oak Dr/Magee Ranch Rd Southbound					Blackhawk Rd Westbound					Hidden Oak Dr/Magee Ranch Rd Northbound					Blackhawk Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	4	0	12	0	16	2	133	1	0	136	15	0	5	0	20	1	35	4	0	40	212	0
7:15	7	0	8	0	15	5	104	4	0	113	19	0	8	0	27	2	103	2	0	107	262	0
7:30	8	1	17	0	26	5	82	2	1	90	28	2	10	0	40	3	75	12	0	90	246	1
7:45	5	0	18	0	23	3	127	4	1	135	26	2	12	0	40	6	71	10	0	87	285	1
Total	24	1	55	0	80	15	446	11	2	474	88	4	35	0	127	12	284	28	0	324	1005	2
8:00	8	0	10	0	18	5	101	9	0	115	19	9	11	0	39	16	87	7	0	110	282	0
8:15	8	0	22	1	31	5	63	4	1	73	24	2	12	0	38	4	56	10	0	70	212	2
8:30	7	0	11	0	18	6	36	5	0	47	15	0	13	0	28	7	80	10	0	97	190	0
8:45	5	0	11	0	16	5	47	5	0	57	15	0	8	0	23	8	53	8	0	69	165	0
Total	28	0	54	1	83	21	247	23	1	292	73	11	44	0	128	35	276	35	0	346	849	2
14:00	3	2	4	0	9	2	56	7	1	66	6	0	3	1	10	2	50	6	0	58	143	2
14:15	6	1	7	0	14	4	51	7	0	62	9	0	3	0	12	5	62	12	0	79	167	0
14:30	6	1	9	0	16	8	73	10	0	91	15	0	5	0	20	7	64	9	0	80	207	0
14:45	9	2	9	0	20	8	82	10	0	100	15	0	7	0	22	5	54	7	0	66	208	0
Total	24	6	29	0	59	22	262	34	1	319	45	0	18	1	64	19	230	34	0	283	725	2
15:00	9	1	10	0	20	11	103	7	0	121	6	1	4	0	11	8	73	14	0	95	247	0
15:15	12	1	11	0	24	8	95	7	0	110	13	0	7	0	20	9	116	16	0	141	295	0
15:30	6	1	6	0	13	6	94	6	0	106	9	0	17	0	26	11	144	20	0	175	320	0
15:45	15	0	4	0	19	5	85	12	1	103	10	0	10	0	20	17	133	20	0	170	312	1
Total	42	3	31	0	76	30	377	32	1	440	38	1	38	0	77	45	466	70	0	581	1174	1
16:00	10	0	3	0	13	14	116	10	0	140	8	0	6	0	14	9	84	10	0	103	270	0
16:15	6	2	5	0	13	13	116	15	0	144	8	0	8	0	16	5	65	10	0	80	253	0
16:30	11	1	17	0	29	8	102	8	0	118	13	0	7	0	20	8	66	10	0	84	251	0
16:45	5	0	7	0	12	18	114	16	1	149	8	0	8	0	16	11	64	10	0	85	262	1
Total	32	3	32	0	67	53	448	49	1	551	37	0	29	0	66	33	279	40	0	352	1036	1
17:00	3	1	6	0	10	12	103	9	0	124	13	0	9	0	22	6	63	14	0	83	239	0
17:15	7	1	4	0	12	17	113	13	0	143	8	1	4	0	13	13	80	14	0	107	275	0
17:30	5	0	5	0	10	10	116	6	0	132	1	0	6	0	7	6	105	9	0	120	269	0
17:45	7	0	4	0	11	15	104	9	0	128	10	0	8	0	18	9	64	13	0	86	243	0
Total	22	2	19	0	43	54	436	37	0	527	32	1	27	0	60	34	312	50	0	396	1026	0
Grand Total	172	15	220	1	408	195	2216	186	6	2603	313	17	191	1	522	178	1847	257	0	2282	5815	8
Apprch %	42.2%	3.7%	53.9%	0.2%		7.5%	85.1%	7.1%	0.2%		60.0%	3.3%	36.6%	0.2%		7.8%	80.9%	11.3%	0.0%			
Total %	3.0%	0.3%	3.8%	0.0%	7.0%	3.4%	38.1%	3.2%	0.1%	44.8%	5.4%	0.3%	3.3%	0.0%	9.0%	3.1%	31.8%	4.4%	0.0%	39.2%	100.0%	

AM PEAK HOUR	Hidden Oak Dr/Magee Ranch Rd Southbound					Blackhawk Rd Westbound					Hidden Oak Dr/Magee Ranch Rd Northbound					Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
7:15	7	0	8	0	15	5	104	4	0	113	19	0	8	0	27	2	103	2	0	107	262
7:30	8	1	17	0	26	5	82	2	1	90	28	2	10	0	40	3	75	12	0	90	246
7:45	5	0	18	0	23	3	127	4	1	135	26	2	12	0	40	6	71	10	0	87	285
8:00	8	0	10	0	18	5	101	9	0	115	19	9	11	0	39	16	87	7	0	110	282
Total Volume	28	1	53	0	82	18	414	19	2	453	92	13	41	0	146	27	336	31	0	394	1075
% App Total	34.1%	1.2%	64.6%	0.0%		4.0%	91.4%	4.2%	0.4%		63.0%	8.9%	28.1%	0.0%		6.9%	85.3%	7.9%	0.0%		
PHF	.875	.250	.736	.000	.788	.900	.815	.528	.500	.839	.821	.361	.854	.000	.913	.422	.816	.646	.000	.895	.943

NOON PEAK	Hidden Oak Dr/Magee Ranch Rd Southbound					Blackhawk Rd Westbound					Hidden Oak Dr/Magee Ranch Rd Northbound					Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:15 to 16:15																					
Peak Hour For Entire Intersection Begins at 15:15																					
15:15	12	1	11	0	24	8	95	7	0	110	13	0	7	0	20	9	116	16	0	141	295
15:30	6	1	6	0	13	6	94	6	0	106	9	0	17	0	26	11	144	20	0	175	320
15:45	15	0	4	0	19	5	85	12	1	103	10	0	10	0	20	17	133	20	0	170	312
16:00	10	0	3	0	13	14	116	10	0	140	8	0	6	0	14	9	84	10	0	103	270
Total Volume	43	2	24	0	69	33	390	35	1	459	40	0	40	0	80	46	477	66	0	589	1197
% App Total	62.3%	2.9%	34.8%	0.0%		7.2%	85.0%	7.6%	0.2%		50.0%	0.0%	50.0%	0.0%		7.8%	81.0%	11.2%	0.0%		
PHF	.717	.500	.545	.000	.719	.589	.841	.729	.250	.820	.769	.000	.588	.000	.769	.676	.828	.825	.000	.841	.935

PM PEAK HOUR	Hidden Oak Dr/Magee Ranch Rd Southbound					Blackhawk Rd Westbound					Hidden Oak Dr/Magee Ranch Rd Northbound					Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	5	0	7	0	12	18	114	16	1	149	8	0	8	0	16	11	64	10	0	85	262
17:00	3	1	6	0	10	12	103	9	0	124	13	0	9	0	22	6	63	14	0	83	239
17:15	7	1	4	0	12	17	113	13	0	143	8	1	4	0	13	13	80	14	0	107	275
17:30	5	0	5	0	10	10	116	6	0	132	1	0	6	0	7	6	105	9	0	120	269
Total Volume	20	2	22	0	44	57	446	44	1	548	30	1	27	0	58	36	312	47	0	395	1045
% App Total	45.5%	4.5%	50.0%	0.0%		10.4%	81.4%	8.0%	0.2%		51.7%	1.7%	46.6%	0.0%		9.1%	79.0%	11.9%	0.0%		
PHF	.714	.500	.786	.000	.917	.792	.961	.688	.250	.919	.577	.250	.750	.000	.659	.692	.743	.839	.000	.823	.950

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-009 Hidden Oak Dr/Magee Ranch Rd & Blackhawk Rd
Date : 3/30/2017

Bank 1 Count = Bikes & Peds

	Hidden Oak Dr/Magee Ranch Rd Southbound					Blackhawk Rd Westbound					Hidden Oak Dr/Magee Ranch Rd Northbound					Blackhawk Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	1	1
7:15	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
7:30	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	5	0	0	0	0	0	0	0	1	0	0	1	1	6
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
14:00	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
14:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
Total	0	0	0	9	0	0	1	0	3	1	0	0	0	0	0	0	1	0	0	1	2	12
15:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
15:15	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	1	2
15:30	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
Total	0	0	0	0	0	0	3	0	2	3	0	0	0	1	0	0	1	0	0	1	4	3
16:00	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0
16:15	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	0
16:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	1	1
16:45	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3	0
Total	0	0	0	0	0	0	7	0	1	7	0	0	0	0	0	0	2	0	0	2	9	1
17:00	0	0	0	0	0	0	1	0	1	1	0	0	0	2	0	0	0	0	2	0	1	5
17:15	0	0	0	0	0	0	9	0	0	9	0	0	1	0	1	0	2	0	0	2	12	0
17:30	0	0	0	0	0	0	1	0	2	1	0	0	0	0	0	0	2	0	0	2	3	2
17:45	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	0	0	0	0	0	15	0
Total	0	0	0	0	0	0	26	0	3	26	0	0	1	2	1	0	4	0	2	4	31	7
Grand Total	0	0	0	10	0	0	37	0	18	37	0	0	1	3	1	0	9	0	2	9	47	33
Apprch %	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	100.0%			0.0%	100.0%	0.0%				
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	78.7%	0.0%		78.7%	0.0%	0.0%	2.1%		2.1%	0.0%	19.1%	0.0%		19.1%	100.0%	

AM PEAK HOUR	Hidden Oak Dr/Magee Ranch Rd Southbound					Blackhawk Rd Westbound					Hidden Oak Dr/Magee Ranch Rd Northbound					Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
7:15	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	1	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000

NOON PEAK	Hidden Oak Dr/Magee Ranch Rd Southbound					Blackhawk Rd Westbound					Hidden Oak Dr/Magee Ranch Rd Northbound					Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 15:15 to 16:15																					
Peak Hour For Entire Intersection Begins at 15:15																					
15:15	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	1
15:30	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
16:00	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	0	4	0	2	4	0	0	0	1	0	0	1	0	0	1	5
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.500	.000		.500	.000	.000	.000		.000	.000	.250	.000		.250	.625

PM PEAK HOUR	Hidden Oak Dr/Magee Ranch Rd Southbound					Blackhawk Rd Westbound					Hidden Oak Dr/Magee Ranch Rd Northbound					Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3
17:00	0	0	0	0	0	0	1	0	1	1	0	0	0	2	0	0	0	0	2	0	1
17:15	0	0	0	0	0	0	9	0	0	9	0	0	1	0	1	0	2	0	0	2	12
17:30	0	0	0	0	0	0	1	0	2	1	0	0	0	0	0	0	2	0	0	2	3
Total Volume	0	0	0	0	0	0	14	0	3	14	0	0	1	2	1	0	4	0	2	4	19
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	100.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.389	.000		.389	.000	.000	.250		.250	.000	.500	.000		.500	.396

Hidden Oak Dr/Magee Ranch Rd & Blackhawk Rd

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-009

AM Peak Hour	07:15 - 08:15
NOON Peak Hour	15:15 - 16:15
PM Peak Hour	16:45 - 17:45

Peak Hour Summary

Southbound Approach

Hidden Oak Dr/Magee F

AM	53	1	28	0	59
NOON	24	2	43	0	81
PM	22	2	20	0	81

Eastbound Approach

Blackhawk Rd

	AM	NOON	PM
	559	454	498
	0	0	0
	27	46	36
	336	477	312
	31	66	47
	AM	NOON	PM

Westbound Approach

	AM	NOON	PM
	19	35	44
	414	390	446
	18	33	57
	2	1	1
	407	561	360
	AM	NOON	PM

CONTROL

Northbound Approach

AM	50	0	92	13	41
NOON	101	0	40	0	40
PM	106	0	30	1	27

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	82	59	AM
	69	81	NOON
	44	81	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
559	454	498		453	459	548
394	589	395		407	561	360

	South Leg	
AM	50	146
NOON	101	80
PM	106	58

Total Volume Per Leg

	North Leg
AM	141
NOON	150
PM	125

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
953	1043	893	860	1020	908

	South Leg
AM	196
NOON	181
PM	164

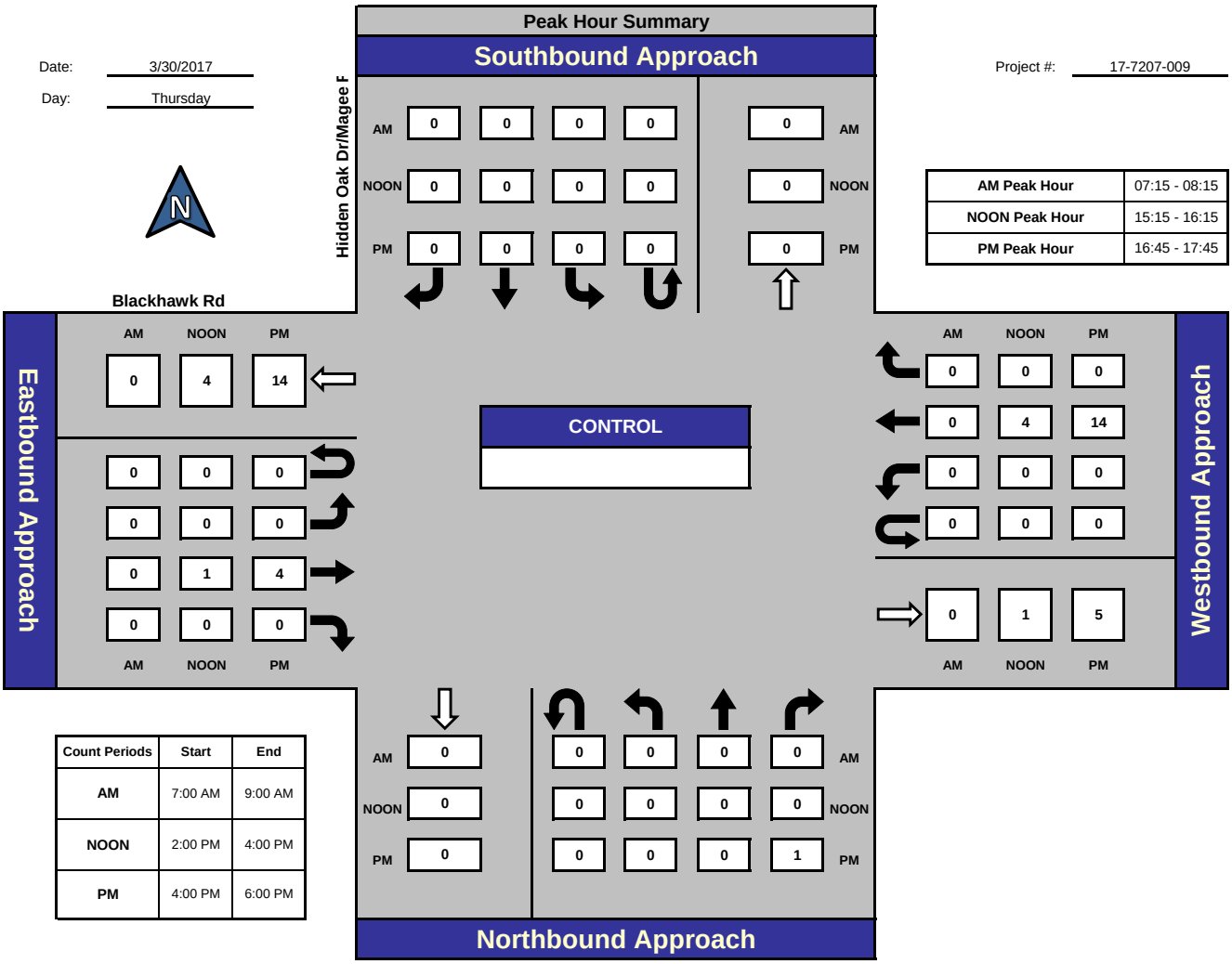
Hidden Oak Dr/Magee Ranch Rd & Blackhawk Rd

Date: 3/30/2017

Day: Thursday

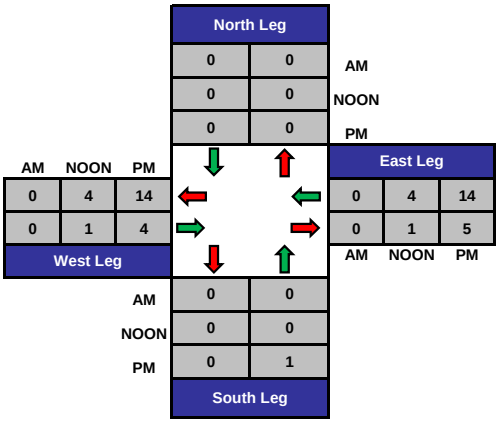
Project #: 17-7207-009

Peak Hour Summary	
AM Peak Hour	07:15 - 08:15
NOON Peak Hour	15:15 - 16:15
PM Peak Hour	16:45 - 17:45

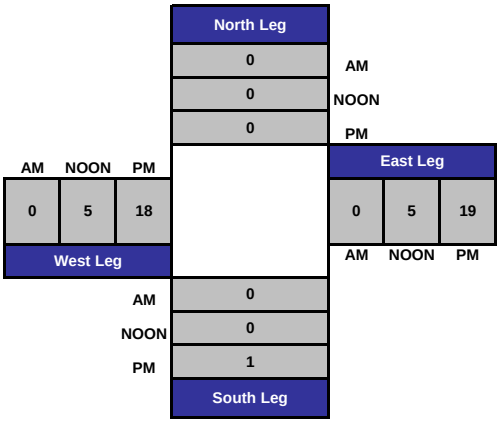


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-010 Blackhawk Rd & Blackhawk Dr
Date : 3/30/2017

Unshifted Count = All Vehicles & Uturns

	Blackhawk Rd Southbound					Blackhawk Dr Westbound					Blackhawk Rd Northbound					Blackhawk Dr Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	14	40	0	0	54	44	0	44	0	88	0	113	20	1	134	0	0	0	0	0	276	1
7:15	19	91	0	1	111	52	0	33	0	85	0	49	14	0	63	0	0	0	0	0	259	1
7:30	25	93	0	0	118	68	0	38	0	106	0	71	30	0	101	0	0	0	0	0	325	0
7:45	19	68	0	1	88	84	0	42	0	126	0	93	42	0	135	0	0	0	0	0	349	1
Total	77	292	0	2	371	248	0	157	0	405	0	326	106	1	433	0	0	0	0	0	1209	3
8:00	21	99	0	0	120	73	0	34	0	107	0	64	24	0	88	0	0	0	0	0	315	0
8:15	15	53	0	1	69	75	0	16	0	91	0	47	28	0	75	0	0	0	0	0	235	1
8:30	23	68	0	0	91	67	0	20	0	87	0	31	33	0	64	0	0	0	0	0	242	0
8:45	26	63	0	1	90	59	0	12	0	71	0	39	37	1	77	0	0	0	0	0	238	2
Total	85	283	0	2	370	274	0	82	0	356	0	181	122	1	304	0	0	0	0	0	1030	3
14:00	14	44	0	0	58	49	0	24	0	73	0	42	59	0	101	0	0	0	0	0	232	0
14:15	20	61	0	1	82	50	0	22	0	72	0	55	52	0	107	0	0	0	0	0	261	1
14:30	19	61	0	0	80	64	0	28	1	93	0	60	70	0	130	0	0	0	0	0	303	1
14:45	20	63	0	0	83	62	0	25	0	87	0	83	66	1	150	0	0	0	0	0	320	1
Total	73	229	0	1	303	225	0	99	1	325	0	240	247	1	488	0	0	0	0	0	1116	3
15:00	22	65	0	1	88	57	0	23	0	80	0	107	54	1	162	0	0	0	0	0	330	2
15:15	20	107	0	0	127	56	0	38	0	94	0	82	68	0	150	0	0	0	0	0	371	0
15:30	39	135	0	1	175	51	0	33	0	84	0	77	84	0	161	0	0	0	0	0	420	1
15:45	38	127	0	0	165	58	0	32	1	91	0	93	88	3	184	0	0	0	0	0	440	4
Total	119	434	0	2	555	222	0	126	1	349	0	359	294	4	657	0	0	0	0	0	1561	7
16:00	29	83	0	0	112	52	0	33	1	86	0	97	85	0	182	0	0	0	0	0	380	1
16:15	15	72	0	0	87	50	0	31	0	81	0	118	81	2	201	0	0	0	0	0	369	2
16:30	22	60	0	0	82	42	0	27	0	69	0	108	91	1	200	0	0	0	0	0	351	1
16:45	24	55	0	0	79	42	0	24	0	66	0	118	73	0	191	0	0	0	0	0	336	0
Total	90	270	0	0	360	186	0	115	1	302	0	441	330	3	774	0	0	0	0	0	1436	4
17:00	17	74	0	0	91	53	0	15	0	68	0	127	76	0	203	0	0	0	0	0	362	0
17:15	12	84	0	0	96	60	0	20	1	81	0	141	72	0	213	0	0	0	0	0	390	1
17:30	30	91	0	0	121	48	0	19	0	67	0	117	78	0	195	0	0	0	0	0	383	0
17:45	22	66	0	0	88	52	0	21	0	73	0	117	81	0	198	0	0	0	0	0	359	0
Total	81	315	0	0	396	213	0	75	1	289	0	502	307	0	809	0	0	0	0	0	1494	1
Grand Total	525	1823	0	7	2355	1368	0	654	4	2026	0	2049	1406	10	3465	0	0	0	0	0	7846	21
Apprch %	22.3%	77.4%	0.0%	0.3%		67.5%	0.0%	32.3%	0.2%		0.0%	59.1%	40.6%	0.3%		0.0%	0.0%	0.0%	0.0%			
Total %	6.7%	23.2%	0.0%	0.1%	30.0%	17.4%	0.0%	8.3%	0.1%	25.8%	0.0%	26.1%	17.9%	0.1%	44.2%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Blackhawk Rd Southbound					Blackhawk Dr Westbound					Blackhawk Rd Northbound					Blackhawk Dr Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
7:15	19	91	0	1	111	52	0	33	0	85	0	49	14	0	63	0	0	0	0	0	259
7:30	25	93	0	0	118	68	0	38	0	106	0	71	30	0	101	0	0	0	0	0	325
7:45	19	68	0	1	88	84	0	42	0	126	0	93	42	0	135	0	0	0	0	0	349
8:00	21	99	0	0	120	73	0	34	0	107	0	64	24	0	88	0	0	0	0	0	315
Total Volume	84	351	0	2	437	277	0	147	0	424	0	277	110	0	387	0	0	0	0	0	1248
% App Total	19.2%	80.3%	0.0%	0.5%		65.3%	0.0%	34.7%	0.0%		0.0%	71.6%	28.4%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.840	.886	.000	.500	.910	.824	.000	.875	.000	.841	.000	.745	.655	.000	.717	.000	.000	.000	.000	.000	.894

NOON PEAK	Blackhawk Rd Southbound					Blackhawk Dr Westbound					Blackhawk Rd Northbound					Blackhawk Dr Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:15 to 16:15																					
Peak Hour For Entire Intersection Begins at 15:15																					
15:15	20	107	0	0	127	56	0	38	0	94	0	82	68	0	150	0	0	0	0	0	371
15:30	39	135	0	1	175	51	0	33	0	84	0	77	84	0	161	0	0	0	0	0	420
15:45	38	127	0	0	165	58	0	32	1	91	0	93	88	3	184	0	0	0	0	0	440
16:00	29	83	0	0	112	52	0	33	1	86	0	97	85	0	182	0	0	0	0	0	380
Total Volume	126	452	0	1	579	217	0	136	2	355	0	349	325	3	677	0	0	0	0	0	1611
% App Total	21.8%	78.1%	0.0%	0.2%		61.1%	0.0%	38.3%	0.6%		0.0%	51.6%	48.0%	0.4%		0.0%	0.0%	0.0%	0.0%		
PHF	.808	.837	.000	.250	.827	.935	.000	.895	.500	.944	.000	.899	.923	.250	.920	.000	.000	.000	.000	.000	.915

PM PEAK HOUR	Blackhawk Rd Southbound					Blackhawk Dr Westbound					Blackhawk Rd Northbound					Blackhawk Dr Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	17	74	0	0	91	53	0	15	0	68	0	127	76	0	203	0	0	0	0	0	362
17:15	12	84	0	0	96	60	0	20	1	81	0	141	72	0	213	0	0	0	0	0	390
17:30	30	91	0	0	121	48	0	19	0	67	0	117	78	0	195	0	0	0	0	0	383
17:45	22	66	0	0	88	52	0	21	0	73	0	117	81	0	198	0	0	0	0	0	359
Total Volume	81	315	0	0	396	213	0	75	1	289	0	502	307	0	809	0	0	0	0	0	1494
% App Total	20.5%	79.5%	0.0%	0.0%		73.7%	0.0%	26.0%	0.3%		0.0%	62.1%	37.9%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.675	.865	.000	.000	.818	.888	.000	.893	.250	.892	.000	.890	.948	.000	.950	.000	.000	.000	.000	.000	.958

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-010 Blackhawk Rd & Blackhawk Dr
Date : 3/30/2017

Bank 1 Count = Bikes & Peds

	Blackhawk Rd Southbound					Blackhawk Dr Westbound					Blackhawk Rd Northbound					Blackhawk Dr Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:15	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	2
8:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	0
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	0
15:00	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2	0
15:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
15:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
15:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
Total	0	0	0	0	0	0	0	1	1	1	0	2	1	0	3	0	0	0	0	0	4	1
16:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
16:15	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	3	0
16:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:45	0	0	0	0	0	0	0	3	1	3	0	1	0	0	1	0	0	0	0	0	4	1
Total	0	2	0	0	2	0	0	4	1	4	0	3	0	0	3	0	0	0	0	0	9	1
17:00	0	0	0	0	0	0	0	9	0	9	0	0	2	0	2	0	0	0	0	0	11	0
17:15	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
17:30	1	1	0	0	2	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	6	0
17:45	0	2	0	0	2	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	17	0
Total	1	3	0	0	4	1	0	9	0	10	0	18	3	0	21	0	0	0	0	0	35	0
Grand Total	1	7	0	0	8	1	0	14	4	15	0	25	4	0	29	0	0	0	0	0	52	4
Apprch %	12.5%	87.5%	0.0%			6.7%	0.0%	93.3%			0.0%	86.2%	13.8%			0.0%	0.0%	0.0%				
Total %	1.9%	13.5%	0.0%		15.4%	1.9%	0.0%	26.9%		28.8%	0.0%	48.1%	7.7%		55.8%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	Blackhawk Rd Southbound					Blackhawk Dr Westbound					Blackhawk Rd Northbound					Blackhawk Dr Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
7:15	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.250	.000		.250	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.250

NOON PEAK	Blackhawk Rd Southbound					Blackhawk Dr Westbound					Blackhawk Rd Northbound					Blackhawk Dr Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 15:15 to 16:15																					
Peak Hour For Entire Intersection Begins at 15:15																					
15:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
15:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
16:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	1	0	0	3	0	0	3	0	0	0	0	0	3
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.750	.000		.750	.000	.000	.000		.000	.750

PM PEAK HOUR	Blackhawk Rd Southbound					Blackhawk Dr Westbound					Blackhawk Rd Northbound					Blackhawk Dr Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0	0	0	0	0	9	0	9	0	0	2	0	2	0	0	0	0	0	11
17:15	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
17:30	1	1	0	0	2	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	6
17:45	0	2	0	0	2	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	17
Total Volume	1	3	0	0	4	1	0	9	0	10	0	18	3	0	21	0	0	0	0	0	35
% App Total	25.0%	75.0%	0.0%			10.0%	0.0%	90.0%			0.0%	85.7%	14.3%			0.0%	0.0%	0.0%			
PHF	.250	.375	.000		.500	.250	.000	.250		.278	.000	.300	.375		.350	.000	.000	.000		.000	.515

Blackhawk Rd & Blackhawk Dr

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-010

AM Peak Hour	07:15 - 08:15
NOON Peak Hour	15:15 - 16:15
PM Peak Hour	17:00 - 18:00

Peak Hour Summary

Southbound Approach

Blackhawk Rd

AM	0	351	84	2	426
NOON	0	452	126	1	486
PM	0	315	81	0	577

Eastbound Approach

Blackhawk Dr

	AM	NOON	PM
	0	0	0
	0	0	0
	0	0	0
	0	0	0
	0	0	0
	AM	NOON	PM

Westbound Approach

	AM	NOON	PM
	147	136	75
	0	0	0
	277	217	213
	0	2	1
	194	453	389
	AM	NOON	PM

CONTROL

Northbound Approach

AM	628	0	0	277	110
NOON	672	3	0	349	325
PM	528	0	0	502	307

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	437	426	AM
	579	486	NOON
	396	577	PM

West Leg			East Leg		
AM	NOON	PM			
0	0	0	424	355	289
0	0	0	194	453	389
			AM	NOON	PM

	South Leg	
AM	628	387
NOON	672	677
PM	528	809

Total Volume Per Leg

	North Leg
AM	863
NOON	1065
PM	973

West Leg			East Leg		
AM	NOON	PM			
0	0	0	618	808	678
			AM	NOON	PM

	South Leg
AM	1015
NOON	1349
PM	1337

Blackhawk Rd & Blackhawk Dr

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-010

AM Peak Hour	07:15 - 08:15
NOON Peak Hour	15:15 - 16:15
PM Peak Hour	17:00 - 18:00

Peak Hour Summary

Southbound Approach (Blackhawk Rd)

AM	0	1	0	0	0	AM
NOON	0	0	0	0	3	NOON
PM	0	3	1	0	27	PM

Eastbound Approach (Blackhawk Dr)

AM	NOON	PM
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

Westbound Approach

AM	NOON	PM
0	0	9
0	0	0
0	0	1
0	0	0
0	0	4

CONTROL

Northbound Approach

AM	1	0	0	0	0	AM
NOON	0	0	0	3	0	NOON
PM	4	0	0	18	3	PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	1	0	AM
	0	3	NOON
	4	27	PM

West Leg AM	NOON	PM		East Leg AM	NOON	PM
0	0	0		0	0	10
0	0	0		0	0	4

	South Leg	
AM	1	0
NOON	0	3
PM	4	21

Total Volume Per Leg

	North Leg
AM	1
NOON	3
PM	31

West Leg AM	NOON	PM		East Leg AM	NOON	PM
0	0	0		0	0	14

	South Leg
AM	1
NOON	3
PM	25

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-011 Blackhawk Rd/Crow Canyon Rd & Camino Tassajara
Date : 3/30/2017

Unshifted Count = All Vehicles & Uturns

	Blackhawk Rd/Crow Canyon Rd Southbound					Camino Tassajara Westbound					Blackhawk Rd/Crow Canyon Rd Northbound					Camino Tassajara Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	17	52	41	0	110	115	140	80	0	335	55	46	41	0	142	22	49	36	0	107	694	0
7:15	54	59	38	0	151	106	150	33	0	289	54	24	53	1	132	24	63	45	0	132	704	1
7:30	68	97	25	0	190	127	153	58	0	338	60	46	50	0	156	31	78	51	0	160	844	0
7:45	60	60	55	0	175	182	205	48	0	435	62	76	61	0	199	40	76	62	0	178	987	0
Total	199	268	159	0	626	530	648	219	0	1397	231	192	205	1	629	117	266	194	0	577	3229	1
8:00	46	100	45	0	191	179	239	49	1	468	95	48	53	1	197	28	59	63	0	150	1006	2
8:15	29	56	52	0	137	156	227	37	0	420	110	42	46	1	199	22	104	58	0	184	940	1
8:30	38	85	44	0	167	127	99	29	0	255	87	66	63	1	217	50	105	86	0	241	880	1
8:45	40	70	37	0	147	116	130	40	0	286	68	69	65	4	206	34	112	68	0	214	853	4
Total	153	311	178	0	642	578	695	155	1	1429	360	225	227	7	819	134	380	275	0	789	3679	8
14:00	46	58	48	0	152	60	99	34	0	193	73	81	76	2	232	27	98	34	0	159	736	2
14:15	32	72	34	0	138	67	94	40	0	201	71	89	71	3	234	49	117	38	0	204	777	3
14:30	56	60	47	0	163	83	110	41	0	234	88	84	82	3	257	34	101	40	0	175	829	3
14:45	55	71	42	0	168	96	102	62	0	260	92	90	89	1	272	61	121	43	0	225	925	1
Total	189	261	171	0	621	306	405	177	0	888	324	344	318	9	995	171	437	155	0	763	3267	9
15:00	62	87	38	0	187	117	150	61	0	328	78	97	90	1	266	54	122	50	0	226	1007	1
15:15	75	81	40	0	196	102	127	57	0	286	91	89	86	3	269	68	166	69	0	303	1054	3
15:30	90	115	34	0	239	86	115	51	0	252	107	129	115	2	353	52	171	76	0	299	1143	2
15:45	99	100	54	0	253	90	136	59	0	285	81	130	93	3	307	61	188	73	0	322	1167	3
Total	326	383	166	0	875	395	528	228	0	1151	357	445	384	9	1195	235	647	268	0	1150	4371	9
16:00	60	94	40	0	194	121	143	60	0	324	89	124	101	2	316	47	144	57	0	248	1082	2
16:15	60	83	54	0	197	95	101	73	0	269	99	125	103	2	329	52	149	58	0	259	1054	2
16:30	68	81	34	0	183	88	103	65	0	256	107	129	97	1	334	62	120	58	0	240	1013	1
16:45	51	66	31	0	148	88	104	58	0	250	108	142	105	4	359	50	153	64	0	267	1024	4
Total	239	324	159	0	722	392	451	256	0	1099	403	520	406	9	1338	211	566	237	0	1014	4173	9
17:00	59	88	41	0	188	92	114	76	0	282	91	151	134	0	376	66	186	66	0	318	1164	0
17:15	70	79	44	0	193	76	115	66	0	257	115	154	132	4	405	46	180	70	0	296	1151	4
17:30	61	82	47	0	190	100	124	81	0	305	95	131	120	3	349	53	142	69	0	264	1108	3
17:45	59	84	45	0	188	116	136	85	0	337	106	130	108	3	347	54	146	51	0	251	1123	3
Total	249	333	177	0	759	384	489	308	0	1181	407	566	494	10	1477	219	654	256	0	1129	4546	10
Grand Total	1355	1880	1010	0	4245	2585	3216	1343	1	7145	2082	2292	2034	45	6453	1087	2950	1385	0	5422	23265	46
Apprch %	31.9%	44.3%	23.8%	0.0%		36.2%	45.0%	18.8%	0.0%		32.3%	35.5%	31.5%	0.7%		20.0%	54.4%	25.5%	0.0%			
Total %	5.8%	8.1%	4.3%	0.0%	18.2%	11.1%	13.8%	5.8%	0.0%	30.7%	8.9%	9.9%	8.7%	0.2%	27.7%	4.7%	12.7%	6.0%	0.0%	23.3%	100.0%	

AM PEAK HOUR	Blackhawk Rd/Crow Canyon Rd Southbound					Camino Tassajara Westbound					Blackhawk Rd/Crow Canyon Rd Northbound					Camino Tassajara Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	60	60	55	0	175	182	205	48	0	435	62	76	61	0	199	40	76	62	0	178	987
8:00	46	100	45	0	191	179	239	49	1	468	95	48	53	1	197	28	59	63	0	150	1006
8:15	29	56	52	0	137	156	227	37	0	420	110	42	46	1	199	22	104	58	0	184	940
8:30	38	85	44	0	167	127	99	29	0	255	87	66	63	1	217	50	105	86	0	241	880
Total Volume	173	301	196	0	670	644	770	163	1	1578	354	232	223	3	812	140	344	269	0	753	3813
% App Total	25.8%	44.9%	29.3%	0.0%		40.8%	48.8%	10.3%	0.1%		43.6%	28.6%	27.5%	0.4%		18.6%	45.7%	35.7%	0.0%		
PHF	.721	.753	.891	.000	.877	.885	.805	.832	.250	.843	.805	.763	.885	.750	.935	.700	.819	.782	.000	.781	.948

NOON PEAK	Blackhawk Rd/Crow Canyon Rd Southbound					Camino Tassajara Westbound					Blackhawk Rd/Crow Canyon Rd Northbound					Camino Tassajara Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:30 to 16:30																					
Peak Hour For Entire Intersection Begins at 15:30																					
15:30	90	115	34	0	239	86	115	51	0	252	107	129	115	2	353	52	171	76	0	299	1143
15:45	99	100	54	0	253	90	136	59	0	285	81	130	93	3	307	61	188	73	0	322	1167
16:00	60	94	40	0	194	121	143	60	0	324	89	124	101	2	316	47	144	57	0	248	1082
16:15	60	83	54	0	197	95	101	73	0	269	99	125	103	2	329	52	149	58	0	259	1054
Total Volume	309	392	182	0	883	392	495	243	0	1130	376	508	412	9	1305	212	652	264	0	1128	4446
% App Total	35.0%	44.4%	20.6%	0.0%		34.7%	43.8%	21.5%	0.0%		28.8%	38.9%	31.6%	0.7%		18.8%	57.8%	23.4%	0.0%		
PHF	.780	.852	.843	.000	.873	.810	.865	.832	.000	.872	.879	.977	.896	.750	.924	.869	.867	.868	.000	.876	.952

PM PEAK HOUR	Blackhawk Rd/Crow Canyon Rd Southbound					Camino Tassajara Westbound					Blackhawk Rd/Crow Canyon Rd Northbound					Camino Tassajara Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	59	88	41	0	188	92	114	76	0	282	91	151	134	0	376	66	186	66	0	318	1164
17:15	70	79	44	0	193	76	115	66	0	257	115	154	132	4	405	46	180	70	0	296	1151
17:30	61	82	47	0	190	100	124	81	0	305	95	131	120	3	349	53	142	69	0	264	1108
17:45	59	84	45	0	188	116	136	85	0	337	106	130	108	3	347	54	146	51	0	251	1123
Total Volume	249	333	177	0	759	384	489	308	0	1181	407	566	494	10	1477	219	654	256	0	1129	4546
% App Total	32.8%	43.9%	23.3%	0.0%		32.5%	41.4%	26.1%	0.0%		27.6%	38.3%	33.4%	0.7%		19.4%	57.9%	22.7%	0.0%		
PHF	.889	.946	.941	.000	.983	.828	.899	.906	.000	.876	.885	.919	.922	.625	.912	.830	.879	.914	.000	.888	.976

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-011 Blackhawk Rd/Crow Canyon Rd & Camino Tassajara
Date : 3/30/2017

Bank 1 Count = Bikes & Peds

	Blackhawk Rd/Crow Canyon Rd Southbound					Camino Tassajara Westbound					Blackhawk Rd/Crow Canyon Rd Northbound					Camino Tassajara Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:30	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	1	0	1	1	2	3
7:45	0	0	0	0	0	0	1	0	3	1	0	0	0	5	0	0	0	0	0	0	1	8
Total	0	0	1	0	1	0	2	0	4	2	0	0	0	6	0	0	1	0	1	1	4	11
8:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	2	0
8:15	1	0	0	2	1	0	0	0	2	0	1	0	1	2	2	0	1	0	0	1	4	6
8:30	0	0	0	1	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	1
8:45	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	1	1	3
Total	1	0	0	4	1	0	2	0	3	2	1	0	2	2	3	0	3	0	1	3	9	10
14:00	0	0	0	0	0	0	0	0	2	0	2	0	0	1	2	0	0	0	0	0	2	3
14:15	0	0	0	2	0	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	3	2
14:30	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	1
14:45	0	0	0	4	0	0	0	0	2	0	0	0	0	1	0	2	3	0	0	5	5	7
Total	0	0	0	6	0	0	1	0	5	1	2	1	0	2	3	3	4	0	0	7	11	13
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
15:15	0	0	0	1	0	0	0	1	1	1	0	0	0	0	0	1	0	0	0	1	2	2
15:30	0	0	1	0	1	0	0	0	4	0	1	0	0	0	1	0	2	0	0	2	4	4
15:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0
Total	1	0	1	1	2	0	0	1	5	1	1	0	0	2	1	1	3	0	0	4	8	8
16:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0
16:15	0	2	0	3	2	0	0	0	1	0	1	0	0	0	1	0	1	0	2	1	4	6
16:30	0	1	1	1	2	0	5	0	1	5	0	0	0	0	0	0	2	0	0	2	9	2
16:45	0	0	1	2	1	0	1	0	0	1	1	0	0	0	1	1	0	1	2	2	5	4
Total	0	3	2	6	5	0	6	1	2	7	2	0	0	0	2	1	3	1	4	5	19	12
17:00	1	0	0	1	1	0	0	0	0	0	1	0	0	3	1	0	0	0	0	0	2	4
17:15	1	0	1	0	2	0	1	0	0	1	0	0	0	2	0	1	0	0	0	1	4	2
17:30	3	0	0	1	3	0	2	2	1	4	0	4	0	0	4	0	1	0	0	1	12	2
17:45	1	0	0	0	1	0	0	0	0	0	0	15	0	0	15	0	1	1	1	2	18	1
Total	6	0	1	2	7	0	3	2	1	5	1	19	0	5	20	1	2	1	1	4	36	9
Grand Total	8	3	5	19	16	0	14	4	20	18	7	20	2	17	29	6	16	2	7	24	87	63
Apprch %	50.0%	18.8%	31.3%			0.0%	77.8%	22.2%			24.1%	69.0%	6.9%			25.0%	66.7%	8.3%				
Total %	9.2%	3.4%	5.7%		18.4%	0.0%	16.1%	4.6%		20.7%	8.0%	23.0%	2.3%		33.3%	6.9%	18.4%	2.3%		27.6%	100.0%	

AM PEAK HOUR	Blackhawk Rd/Crow Canyon Rd Southbound					Camino Tassajara Westbound					Blackhawk Rd/Crow Canyon Rd Northbound					Camino Tassajara Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	0	0	0	0	0	1	0	3	1	0	0	0	5	0	0	0	0	0	0	1
8:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	2
8:15	1	0	0	2	1	0	0	0	2	0	1	0	1	2	2	0	1	0	0	1	4
8:30	0	0	0	1	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Total Volume	1	0	0	3	1	0	3	0	5	3	1	0	2	7	3	0	2	0	0	2	9
% App Total	100.0%	0.0%	0.0%			0.0%	100.0%	0.0%			33.3%	0.0%	66.7%			0.0%	100.0%	0.0%			
PHF	.250	.000	.000		.250	.000	.375	.000		.375	.250	.000	.500		.375	.000	.500	.000		.500	.563

NOON PEAK	Blackhawk Rd/Crow Canyon Rd Southbound					Camino Tassajara Westbound					Blackhawk Rd/Crow Canyon Rd Northbound					Camino Tassajara Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 15:30 to 16:30																					
Peak Hour For Entire Intersection Begins at 15:30																					
15:30	0	0	1	0	1	0	0	0	4	0	1	0	0	0	1	0	2	0	0	2	4
15:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
16:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
16:15	0	2	0	3	2	0	0	0	1	0	1	0	0	0	1	0	1	0	2	1	4
Total Volume	1	2	1	3	4	0	0	1	5	1	2	0	0	0	2	0	4	0	2	4	11
% App Total	25.0%	50.0%	25.0%			0.0%	0.0%	100.0%			100.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.250	.250	.250		.500	.000	.000	.250		.250	.500	.000	.000		.500	.000	.500	.000		.500	.688

PM PEAK HOUR	Blackhawk Rd/Crow Canyon Rd Southbound					Camino Tassajara Westbound					Blackhawk Rd/Crow Canyon Rd Northbound					Camino Tassajara Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	1	0	0	1	1	0	0	0	0	0	1	0	0	3	1	0	0	0	0	0	2
17:15	1	0	1	0	2	0	1	0	0	1	0	0	0	2	0	1	0	0	0	1	4
17:30	3	0	0	1	3	0	2	2	1	4	0	4	0	0	4	0	1	0	0	1	12
17:45	1	0	0	0	1	0	0	0	0	0	0	15	0	0	15	0	1	1	1	2	18
Total Volume	6	0	1	2	7	0	3	2	1	5	1	19	0	5	20	1	2	1	1	4	36
% App Total	85.7%	0.0%	14.3%			0.0%	60.0%	40.0%			5.0%	95.0%	0.0%			25.0%	50.0%	25.0%			
PHF	.500	.000	.250		.583	.000	.375	.250		.313	.250	.317	.000		.333	.250	.500	.250		.500	.500

Blackhawk Rd/Crow Canyon Rd & Camino Tassajara

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-011

AM Peak Hour	07:45 - 08:45
NOON Peak Hour	15:30 - 16:30
PM Peak Hour	17:00 - 18:00

Peak Hour Summary

Southbound Approach (Blackhawk Rd/Crow Ca)

AM	196	301	173	0	535
NOON	182	392	309	0	963
PM	177	333	249	0	1093

Eastbound Approach (Camino Tassajara)

	AM	NOON	PM
	1320	1053	1073
	0	0	0
	140	212	219
	344	652	654
	269	264	256

Westbound Approach

	AM	NOON	PM
	163	243	308
	770	495	489
	644	392	384
	1	0	0
	741	1373	1397

CONTROL

Northbound Approach

AM	1217	3	354	232	223
NOON	1057	9	376	508	412
PM	983	10	407	566	494

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg			West Leg			South Leg	
	670	535	1578	1130	1181	1320	1053	1073	1217	812
	883	963	741	1373	1397	753	1128	1129	1057	1305
	759	1093							983	1477
	AM	NOON	AM	NOON	PM	AM	NOON	PM	AM	NOON

Total Volume Per Leg

	North Leg	East Leg	West Leg	South Leg
	1205	2319	2073	2029
	1846	2503	2181	2362
	1852	2578	2202	2460
	AM	AM	AM	AM
	NOON	NOON	NOON	NOON
	PM	PM	PM	PM

Blackhawk Rd/Crow Canyon Rd & Camino Tassajara

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-011

Peak Hour Summary	
AM Peak Hour	07:45 - 08:45
NOON Peak Hour	15:30 - 16:30
PM Peak Hour	17:00 - 18:00

Southbound Approach

Blackhawk Rd/Crow Ca

AM	0	0	1	0	0	AM
NOON	1	2	1	0	1	NOON
PM	1	0	6	0	22	PM

Eastbound Approach

Camino Tassajara

AM	NOON	PM
4	3	5
0	0	0
0	0	1
2	4	2
0	0	1
AM	NOON	PM

Westbound Approach

AM	NOON	PM
0	1	2
3	0	3
0	0	0
0	0	0
5	5	8
AM	NOON	PM

CONTROL

Northbound Approach

AM	0	0	1	0	2	AM
NOON	2	0	2	0	0	NOON
PM	1	0	1	19	0	PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

North Leg		
1	0	AM
4	1	NOON
7	22	PM

West Leg				East Leg			
AM	NOON	PM		AM	NOON	PM	
4	3	5		3	1	5	
2	4	4		5	5	8	

South Leg		
0	3	AM
2	2	NOON
1	20	PM

Total Volume Per Leg

North Leg		
1		AM
5		NOON
29		PM

West Leg				East Leg			
AM	NOON	PM		AM	NOON	PM	
6	7	9		8	6	13	

South Leg	
3	AM
4	NOON
21	PM

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-013 Calle Arroyo & Diablo Rd
Date : 3/30/2017

Unshifted Count = All Vehicles & Uturns

	Calle Arroyo Southbound					Diablo Rd Westbound					Calle Arroyo Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	0	3	0	3	0	173	0	0	173	0	0	0	0	0	2	93	0	0	95	271	0
7:15	0	0	2	0	2	0	186	0	0	186	0	0	0	0	0	2	124	0	0	126	314	0
7:30	0	0	13	0	13	0	153	0	0	153	0	0	0	0	0	2	110	0	0	112	278	0
7:45	2	0	5	0	7	0	163	0	0	163	0	0	0	0	0	3	183	0	0	186	356	0
Total	2	0	23	0	25	0	675	0	0	675	0	0	0	0	0	9	510	0	0	519	1219	0
8:00	0	0	1	0	1	0	209	0	0	209	0	0	0	0	0	1	134	0	0	135	345	0
8:15	0	0	4	0	4	0	220	0	0	220	0	0	0	0	0	1	102	0	0	103	327	0
8:30	0	0	6	0	6	0	94	0	0	94	0	0	0	0	0	4	136	0	0	140	240	0
8:45	1	0	3	0	4	0	86	0	0	86	0	0	0	0	0	3	101	0	0	104	194	0
Total	1	0	14	0	15	0	609	0	0	609	0	0	0	0	0	9	473	0	0	482	1106	0
14:00	0	0	1	0	1	0	94	1	0	95	0	0	0	0	0	2	110	0	0	112	208	0
14:15	0	0	12	0	12	0	123	0	0	123	0	0	0	0	0	5	92	0	0	97	232	0
14:30	0	0	1	0	1	0	143	0	0	143	0	0	0	0	0	6	118	0	0	124	268	0
14:45	0	0	5	0	5	0	175	0	0	175	0	0	0	0	0	1	100	0	0	101	281	0
Total	0	0	19	0	19	0	535	1	0	536	0	0	0	0	0	14	420	0	0	434	989	0
15:00	0	0	6	0	6	0	170	2	0	172	0	0	0	0	0	2	140	0	0	142	320	0
15:15	2	0	0	0	2	0	179	0	0	179	0	0	0	0	0	3	231	0	0	234	415	0
15:30	1	0	6	0	7	0	174	0	0	174	0	0	0	0	0	3	197	0	0	200	381	0
15:45	0	0	5	0	5	0	158	2	0	160	0	0	0	0	0	4	161	0	0	165	330	0
Total	3	0	17	0	20	0	681	4	0	685	0	0	0	0	0	12	729	0	0	741	1446	0
16:00	1	0	5	0	6	0	149	0	0	149	0	0	0	0	0	1	126	0	0	127	282	0
16:15	0	0	4	0	4	0	164	1	0	165	0	0	0	0	0	6	103	0	0	109	278	0
16:30	1	0	0	0	1	0	169	0	0	169	0	0	0	0	0	4	113	0	0	117	287	0
16:45	0	0	4	0	4	0	169	1	0	170	0	0	0	0	0	0	101	0	0	101	275	0
Total	2	0	13	0	15	0	651	2	0	653	0	0	0	0	0	11	443	0	0	454	1122	0
17:00	0	0	4	0	4	0	156	0	0	156	0	0	0	0	0	7	120	0	0	127	287	0
17:15	0	0	6	0	6	0	165	0	0	165	0	0	0	0	0	5	137	0	0	142	313	0
17:30	0	0	3	0	3	0	139	0	0	139	0	0	0	0	0	3	129	0	0	132	274	0
17:45	1	0	4	0	5	0	154	0	0	154	0	0	0	0	0	7	106	0	0	113	272	0
Total	1	0	17	0	18	0	614	0	0	614	0	0	0	0	0	22	492	0	0	514	1146	0
Grand Total	9	0	103	0	112	0	3765	7	0	3772	0	0	0	0	0	77	3067	0	0	3144	7028	0
Apprch %	8.0%	0.0%	92.0%	0.0%		0.0%	99.8%	0.2%	0.0%		0.0%	0.0%	0.0%	0.0%		2.4%	97.6%	0.0%	0.0%			
Total %	0.1%	0.0%	1.5%	0.0%	1.6%	0.0%	53.6%	0.1%	0.0%	53.7%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	43.6%	0.0%	0.0%	44.7%	100.0%	

AM PEAK HOUR	Calle Arroyo Southbound					Diablo Rd Westbound					Calle Arroyo Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	0	13	0	13	0	153	0	0	153	0	0	0	0	0	2	110	0	0	112	278
7:45	2	0	5	0	7	0	163	0	0	163	0	0	0	0	0	3	183	0	0	186	356
8:00	0	0	1	0	1	0	209	0	0	209	0	0	0	0	0	1	134	0	0	135	345
8:15	0	0	4	0	4	0	220	0	0	220	0	0	0	0	0	1	102	0	0	103	327
Total Volume	2	0	23	0	25	0	745	0	0	745	0	0	0	0	0	7	529	0	0	536	1306
% App Total	8.0%	0.0%	92.0%	0.0%		0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		1.3%	98.7%	0.0%	0.0%		
PHF	.250	.000	.442	.000	.481	.000	.847	.000	.000	.847	.000	.000	.000	.000	.000	.583	.723	.000	.000	.720	.917

NOON PEAK	Calle Arroyo Southbound					Diablo Rd Westbound					Calle Arroyo Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	0	0	6	0	6	0	170	2	0	172	0	0	0	0	0	2	140	0	0	142	320
15:15	2	0	0	0	2	0	179	0	0	179	0	0	0	0	0	3	231	0	0	234	415
15:30	1	0	6	0	7	0	174	0	0	174	0	0	0	0	0	3	197	0	0	200	381
15:45	0	0	5	0	5	0	158	2	0	160	0	0	0	0	0	4	161	0	0	165	330
Total Volume	3	0	17	0	20	0	681	4	0	685	0	0	0	0	0	12	729	0	0	741	1446
% App Total	15.0%	0.0%	85.0%	0.0%		0.0%	99.4%	0.6%	0.0%		0.0%	0.0%	0.0%	0.0%		1.6%	98.4%	0.0%	0.0%		
PHF	.375	.000	.708	.000	.714	.000	.951	.500	.000	.957	.000	.000	.000	.000	.000	.750	.789	.000	.000	.792	.871

PM PEAK HOUR	Calle Arroyo Southbound					Diablo Rd Westbound					Calle Arroyo Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	1	0	0	0	1	0	169	0	0	169	0	0	0	0	0	4	113	0	0	117	287
16:45	0	0	4	0	4	0	169	1	0	170	0	0	0	0	0	0	101	0	0	101	275
17:00	0	0	4	0	4	0	156	0	0	156	0	0	0	0	0	7	120	0	0	127	287
17:15	0	0	6	0	6	0	165	0	0	165	0	0	0	0	0	5	137	0	0	142	313
Total Volume	1	0	14	0	15	0	659	1	0	660	0	0	0	0	0	16	471	0	0	487	1162
% App Total	6.7%	0.0%	93.3%	0.0%		0.0%	99.8%	0.2%	0.0%		0.0%	0.0%	0.0%	0.0%		3.3%	96.7%	0.0%	0.0%		
PHF	.250	.000	.583	.000	.625	.000	.975	.250	.000	.971	.000	.000	.000	.000	.000	.571	.859	.000	.000	.857	.928

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-013 Calle Arroyo & Diablo Rd
Date : 3/30/2017

Bank 1 Count = Bikes & Peds

	Calle Arroyo Southbound					Diablo Rd Westbound					Calle Arroyo Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	2	1
7:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
7:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	3	0	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	3	3
8:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
8:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
8:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0	0	0	2	3	0
8:45	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	1
Total	0	0	1	1	1	0	3	0	0	3	0	0	0	0	0	2	1	0	0	3	7	1
14:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	2	0
14:15	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
14:30	0	0	1	2	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	2
14:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
Total	0	0	1	4	1	0	3	0	0	3	0	0	0	0	0	1	1	0	0	2	6	4
15:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	3	0	0	5	6	0
15:15	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	1	1	0	0	2	6	0
15:30	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	7	1
15:45	0	0	2	0	2	0	2	0	0	2	0	0	0	0	0	22	1	0	0	23	27	0
Total	0	0	4	1	4	0	6	0	0	6	0	0	0	0	0	31	5	0	0	36	46	1
16:00	0	0	0	2	0	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	3	2
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	5	5	0
16:30	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	1	0	0	0	1	6	0
16:45	0	0	0	20	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	2	20
Total	0	0	1	22	1	0	6	0	0	6	0	0	0	0	0	5	4	0	0	9	16	22
17:00	1	0	2	0	3	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	6	0
17:15	0	0	6	0	6	0	10	0	0	10	0	0	0	0	0	1	1	0	0	2	18	0
17:30	0	0	5	0	5	0	2	0	0	2	0	0	0	0	0	6	3	0	0	9	16	0
17:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Total	1	0	13	0	14	0	14	0	0	14	0	0	0	0	0	8	5	0	0	13	41	0
Grand Total	1	0	20	31	21	0	33	0	0	33	0	0	0	0	0	48	17	0	0	65	119	31
Apprch %	4.8%	0.0%	95.2%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			73.8%	26.2%	0.0%				
Total %	0.8%	0.0%	16.8%		17.6%	0.0%	27.7%	0.0%		27.7%	0.0%	0.0%	0.0%		0.0%	40.3%	14.3%	0.0%		54.6%	100.0%	

AM PEAK HOUR	Calle Arroyo Southbound					Diablo Rd Westbound					Calle Arroyo Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	2	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.500	.000		.500	.000	.000	.000		.000	.000	.250	.000		.250	.750

NOON PEAK	Calle Arroyo Southbound					Diablo Rd Westbound					Calle Arroyo Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	3	0	0	5	6
15:15	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	1	1	0	0	2	6
15:30	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	7
15:45	0	0	2	0	2	0	2	0	0	2	0	0	0	0	0	22	1	0	0	23	27
Total Volume	0	0	4	1	4	0	6	0	0	6	0	0	0	0	0	31	5	0	0	36	46
% App Total	0.0%	0.0%	100.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			86.1%	13.9%	0.0%			
PHF	.000	.000	.500		.500	.000	.375	.000		.375	.000	.000	.000		.000	.352	.417	.000		.391	.426

PM PEAK HOUR	Calle Arroyo Southbound					Diablo Rd Westbound					Calle Arroyo Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	1	0	0	0	1	6
16:45	0	0	0	20	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	2
17:00	1	0	2	0	3	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	6
17:15	0	0	6	0	6	0	10	0	0	10	0	0	0	0	0	1	1	0	0	2	18
Total Volume	1	0	9	20	10	0	16	0	0	16	0	0	0	0	0	4	2	0	0	6	32
% App Total	10.0%	0.0%	90.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			66.7%	33.3%	0.0%			
PHF	.250	.000	.375		.417	.000	.400	.000		.400	.000	.000	.000		.000	1.000	.500	.000		.750	.444

Calle Arroyo & Diablo Rd

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-013

Peak Hour Summary	
AM Peak Hour	07:30 - 08:30
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	16:30 - 17:30

Southbound Approach

Calle Arroyo

AM	23	0	2	0	7 AM
NOON	17	0	3	0	16 NOON
PM	14	0	1	0	17 PM

Eastbound Approach

Diablo Rd

AM	NOON	PM
768	698	673
0	0	0
7	12	16
529	729	471
0	0	0
AM	NOON	PM

Westbound Approach

AM	NOON	PM
0	4	1
745	681	659
0	0	0
0	0	0
531	732	472
AM	NOON	PM

CONTROL

Northbound Approach

AM	0	0	0	0	0 AM
NOON	0	0	0	0	0 NOON
PM	0	0	0	0	0 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

North Leg		
25	7	AM
20	16	NOON
15	17	PM

West Leg			East Leg		
AM	NOON	PM			
768	698	673	745	685	660
536	741	487	531	732	472
			AM	NOON	PM

South Leg		
0	0	AM
0	0	NOON
0	0	PM

Total Volume Per Leg

North Leg	
32	AM
36	NOON
32	PM

West Leg			East Leg		
AM	NOON	PM			
1304	1439	1160	1276	1417	1132
			AM	NOON	PM

South Leg	
0	AM
0	NOON
0	PM

Calle Arroyo & Diablo Rd

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-013

Peak Hour Summary	
AM Peak Hour	07:30 - 08:30
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	16:30 - 17:30

Southbound Approach

Calle Arroyo

AM	0	0	0	0	0	AM
NOON	4	0	0	0	31	NOON
PM	9	0	1	0	4	PM

Eastbound Approach

Diablo Rd

AM	NOON	PM
2	10	25
0	0	0
0	31	4
1	5	2
0	0	0
AM	NOON	PM

Westbound Approach

AM	NOON	PM
0	0	0
2	6	16
0	0	0
0	0	0
1	5	3
AM	NOON	PM

CONTROL

Northbound Approach

AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	0	0	0	0	PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

North Leg		
0	0	AM
4	31	NOON
10	4	PM

West Leg			East Leg		
AM	NOON	PM			
2	10	25	2	6	16
1	36	6	1	5	3
			AM	NOON	PM

South Leg		
0	0	AM
0	0	NOON
0	0	PM

Total Volume Per Leg

North Leg		
0		AM
35		NOON
14		PM

West Leg			East Leg		
AM	NOON	PM			
3	46	31	3	11	19
			AM	NOON	PM

South Leg	
0	AM
0	NOON
0	PM

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-014 Alameda Diablo & Diablo Rd
Date : 3/30/2017

Unshifted Count = All Vehicles & Uturns

	Alameda Diablo Southbound					Diablo Rd Westbound					Alameda Diablo Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	0	12	0	12	0	157	0	0	157	0	0	0	0	0	11	90	0	0	101	270	0
7:15	0	0	11	0	11	0	176	0	0	176	0	0	0	0	0	9	109	0	0	118	305	0
7:30	0	0	12	0	12	0	142	0	0	142	0	0	0	0	0	9	104	0	0	113	267	0
7:45	0	0	10	0	10	0	151	0	0	151	0	0	0	0	0	11	174	0	0	185	346	0
Total	0	0	45	0	45	0	626	0	0	626	0	0	0	0	0	40	477	0	0	517	1188	0
8:00	0	0	27	0	27	0	184	0	0	184	0	0	0	0	0	11	120	0	0	131	342	0
8:15	0	0	26	0	26	0	189	0	0	189	0	0	0	0	0	18	87	0	1	106	321	1
8:30	1	0	8	0	9	0	90	1	0	91	0	0	0	0	0	15	117	0	0	132	232	0
8:45	0	0	11	0	11	0	78	2	0	80	0	0	0	0	0	21	83	0	0	104	195	0
Total	1	0	72	0	73	0	541	3	0	544	0	0	0	0	0	65	407	0	1	473	1090	1
14:00	2	0	15	0	17	0	82	2	1	85	0	0	0	0	0	18	92	0	0	110	212	1
14:15	0	0	20	0	20	0	101	0	0	101	0	0	0	0	0	16	81	0	0	97	218	0
14:30	1	0	25	0	26	0	119	1	0	120	0	0	0	0	0	20	95	0	0	115	261	0
14:45	1	0	32	0	33	0	144	0	0	144	0	0	0	0	0	18	85	0	0	103	280	0
Total	4	0	92	0	96	0	446	3	1	450	0	0	0	0	0	72	353	0	0	425	971	1
15:00	0	0	20	0	20	0	154	0	0	154	0	0	0	0	0	16	121	0	0	137	311	0
15:15	1	0	20	0	21	0	157	0	0	157	0	0	0	0	0	23	201	0	0	224	402	0
15:30	1	0	25	0	26	0	149	0	0	149	0	0	0	0	0	15	186	0	0	201	376	0
15:45	0	0	23	0	23	0	138	1	0	139	0	0	0	0	0	22	143	0	0	165	327	0
Total	2	0	88	0	90	0	598	1	0	599	0	0	0	0	0	76	651	0	0	727	1416	0
16:00	0	0	13	0	13	0	135	1	0	136	0	0	0	0	0	27	103	0	0	130	279	0
16:15	1	0	28	0	29	0	131	2	0	133	0	0	0	0	0	13	81	0	0	94	256	0
16:30	0	0	21	0	21	0	154	0	0	154	0	0	0	0	0	21	96	0	0	117	292	0
16:45	0	0	24	0	24	0	143	1	0	144	0	0	0	0	0	16	86	0	0	102	270	0
Total	1	0	86	0	87	0	563	4	0	567	0	0	0	0	0	77	366	0	0	443	1097	0
17:00	0	0	16	0	16	0	142	0	0	142	0	0	0	0	0	13	105	0	0	118	276	0
17:15	0	0	17	0	17	0	150	0	0	150	0	0	0	0	0	16	116	0	0	132	299	0
17:30	0	0	23	0	23	0	115	0	0	115	0	0	0	0	0	11	120	0	0	131	269	0
17:45	0	0	18	0	18	0	134	0	0	134	0	0	0	0	0	13	99	0	0	112	264	0
Total	0	0	74	0	74	0	541	0	0	541	0	0	0	0	0	53	440	0	0	493	1108	0
Grand Total	8	0	457	0	465	0	3315	11	1	3327	0	0	0	0	0	383	2694	0	1	3078	6870	2
Apprch %	1.7%	0.0%	98.3%	0.0%		0.0%	99.6%	0.3%	0.0%		0.0%	0.0%	0.0%	0.0%		12.4%	87.5%	0.0%	0.0%			
Total %	0.1%	0.0%	6.7%	0.0%	6.8%	0.0%	48.3%	0.2%	0.0%	48.4%	0.0%	0.0%	0.0%	0.0%	0.0%	5.6%	39.2%	0.0%	0.0%	44.8%	100.0%	

AM PEAK HOUR	Alameda Diablo Southbound					Diablo Rd Westbound					Alameda Diablo Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	0	12	0	12	0	142	0	0	142	0	0	0	0	0	9	104	0	0	113	267
7:45	0	0	10	0	10	0	151	0	0	151	0	0	0	0	0	11	174	0	0	185	346
8:00	0	0	27	0	27	0	184	0	0	184	0	0	0	0	0	11	120	0	0	131	342
8:15	0	0	26	0	26	0	189	0	0	189	0	0	0	0	0	18	87	0	1	106	321
Total Volume	0	0	75	0	75	0	666	0	0	666	0	0	0	0	0	49	485	0	1	535	1276
% App Total	0.0%	0.0%	100.0%	0.0%		0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		9.2%	90.7%	0.0%	0.2%		
PHF	.000	.000	.694	.000	.694	.000	.881	.000	.000	.881	.000	.000	.000	.000	.000	.681	.697	.000	.250	.723	.922

NOON PEAK	Alameda Diablo Southbound					Diablo Rd Westbound					Alameda Diablo Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	0	0	20	0	20	0	154	0	0	154	0	0	0	0	0	16	121	0	0	137	311
15:15	1	0	20	0	21	0	157	0	0	157	0	0	0	0	0	23	201	0	0	224	402
15:30	1	0	25	0	26	0	149	0	0	149	0	0	0	0	0	15	186	0	0	201	376
15:45	0	0	23	0	23	0	138	1	0	139	0	0	0	0	0	22	143	0	0	165	327
Total Volume	2	0	88	0	90	0	598	1	0	599	0	0	0	0	0	76	651	0	0	727	1416
% App Total	2.2%	0.0%	97.8%	0.0%		0.0%	99.8%	0.2%	0.0%		0.0%	0.0%	0.0%	0.0%		10.5%	89.5%	0.0%	0.0%		
PHF	.500	.000	.880	.000	.865	.000	.952	.250	.000	.954	.000	.000	.000	.000	.000	.826	.810	.000	.000	.811	.881

PM PEAK HOUR	Alameda Diablo Southbound					Diablo Rd Westbound					Alameda Diablo Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	21	0	21	0	154	0	0	154	0	0	0	0	0	21	96	0	0	117	292
16:45	0	0	24	0	24	0	143	1	0	144	0	0	0	0	0	16	86	0	0	102	270
17:00	0	0	16	0	16	0	142	0	0	142	0	0	0	0	0	13	105	0	0	118	276
17:15	0	0	17	0	17	0	150	0	0	150	0	0	0	0	0	16	116	0	0	132	299
Total Volume	0	0	78	0	78	0	589	1	0	590	0	0	0	0	0	66	403	0	0	469	1137
% App Total	0.0%	0.0%	100.0%	0.0%		0.0%	99.8%	0.2%	0.0%		0.0%	0.0%	0.0%	0.0%		14.1%	85.9%	0.0%	0.0%		
PHF	.000	.000	.813	.000	.813	.000	.956	.250	.000	.958	.000	.000	.000	.000	.000	.786	.869	.000	.000	.888	.951

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-014 Alameda Diablo & Diablo Rd
Date : 3/30/2017

Bank 1 Count = Bikes & Peds

	Alameda Diablo Southbound					Diablo Rd Westbound					Alameda Diablo Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
7:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3	0
8:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0
Total	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	4	0
14:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
14:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0
Total	0	0	3	2	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4	2
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	0
15:15	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	5	0
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0
Total	0	0	5	0	5	0	1	0	0	1	0	0	0	0	0	4	0	0	0	4	10	0
16:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	3	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	3	0
16:30	0	0	2	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	4	0
16:45	0	0	1	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10
Total	0	0	4	10	4	0	2	0	0	2	0	0	0	0	0	4	1	0	0	5	11	10
17:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	3	0
17:15	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	11	0
17:30	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	5	0
17:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	13	0	13	0	0	0	0	0	0	0	0	0	0	6	1	0	0	7	20	0
Grand Total	0	0	29	12	29	0	3	0	0	3	0	0	0	0	0	15	5	0	0	20	52	12
Apprch %	0.0%	0.0%	100.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			75.0%	25.0%	0.0%				
Total %	0.0%	0.0%	55.8%		55.8%	0.0%	5.8%	0.0%		5.8%	0.0%	0.0%	0.0%		0.0%	28.8%	9.6%	0.0%		38.5%	100.0%	

AM PEAK HOUR	Alameda Diablo Southbound					Diablo Rd Westbound					Alameda Diablo Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3
% App Total	0.0%	0.0%	100.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.500		.500	.000	.000	.000		.000	.000	.000	.000		.000	.000	.250	.000		.250	.750

NOON PEAK	Alameda Diablo Southbound					Diablo Rd Westbound					Alameda Diablo Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
15:15	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	5
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	5	0	5	0	1	0	0	1	0	0	0	0	0	4	0	0	0	4	10
% App Total	0.0%	0.0%	100.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			
PHF	.000	.000	.313		.313	.000	.250	.000		.250	.000	.000	.000		.000	.333	.000	.000		.333	.500

PM PEAK HOUR	Alameda Diablo Southbound					Diablo Rd Westbound					Alameda Diablo Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	2	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	4
16:45	0	0	1	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	3
17:15	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	11
Total Volume	0	0	13	10	13	0	2	0	0	2	0	0	0	0	0	3	1	0	0	4	19
% App Total	0.0%	0.0%	100.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			75.0%	25.0%	0.0%			
PHF	.000	.000	.361		.361	.000	.250	.000		.250	.000	.000	.000		.000	.375	.250	.000		.500	.432

Alameda Diablo & Diablo Rd

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-014

AM Peak Hour	07:30 - 08:30
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	16:30 - 17:30

Peak Hour Summary

Southbound Approach (Alameda Diablo)

AM	75	0	0	0	49	AM
NOON	88	0	2	0	77	NOON
PM	78	0	0	0	67	PM

Eastbound Approach (Diablo Rd)

AM	NOON	PM
742	686	667
1	0	0
49	76	66
485	651	403
0	0	0

Westbound Approach

AM	NOON	PM
0	1	1
666	598	589
0	0	0
0	0	0
485	653	403

CONTROL

Northbound Approach

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	75	49	AM
	90	77	NOON
	78	67	PM

West Leg AM	NOON	PM		East Leg AM	NOON	PM
742	686	667		666	599	590
535	727	469		485	653	403

	South Leg	
AM	0	0
NOON	0	0
PM	0	0

Total Volume Per Leg

	North Leg
AM	124
NOON	167
PM	145

West Leg AM	NOON	PM	East Leg AM	NOON	PM
1277	1413	1136	1151	1252	993

	South Leg
AM	0
NOON	0
PM	0

Alameda Diablo & Diablo Rd

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-014

Peak Hour Summary	
AM Peak Hour	07:30 - 08:30
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	16:30 - 17:30

Southbound Approach (Alameda Diablo)

AM	2	0	0	0	0
NOON	5	0	0	0	4
PM	13	0	0	0	3

Eastbound Approach (Diablo Rd)

	AM	NOON	PM
	2	6	15
	0	0	0
	0	4	3
	1	0	1
	0	0	0

Westbound Approach

	AM	NOON	PM
	0	0	0
	0	1	2
	0	0	0
	0	0	0
	1	0	1

CONTROL

Northbound Approach

AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	0	0	0	0	0

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		East Leg			West Leg			South Leg	
						AM	NOON	PM		
AM	2	0	0	1	2	2	6	15	0	0
NOON	5	4	1	0	1	1	4	4	0	0
PM	13	3	AM	NOON	PM				0	0

Total Volume Per Leg

	North Leg		East Leg			West Leg			South Leg
						AM	NOON	PM	
AM	2		1	1	3	3	10	19	0
NOON	9		AM	NOON	PM				0
PM	16								0

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-015 Ave Nueva & Diablo Rd
Date : 3/30/2017

Unshifted Count = All Vehicles & Uturns

	Ave Nueva Southbound					Diablo Rd Westbound					Ave Nueva Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	7	0	11	0	18	0	156	3	0	159	0	0	0	0	0	5	65	0	0	70	247	0
7:15	4	0	14	0	18	0	156	6	0	162	0	0	0	0	0	8	123	0	0	131	311	0
7:30	3	0	18	0	21	0	130	2	0	132	0	0	0	0	0	9	93	0	0	102	255	0
7:45	8	0	11	0	19	0	135	5	0	140	0	0	0	0	0	9	150	0	0	159	318	0
Total	22	0	54	0	76	0	577	16	0	593	0	0	0	0	0	31	431	0	0	462	1131	0
8:00	10	0	14	0	24	0	172	5	0	177	0	0	1	0	1	8	121	0	0	129	331	0
8:15	11	0	8	0	19	0	180	4	0	184	1	0	0	0	1	7	85	0	0	92	296	0
8:30	1	0	10	0	11	0	68	3	0	71	0	0	0	0	0	13	101	0	0	114	196	0
8:45	6	0	7	0	13	0	77	4	0	81	0	0	0	0	0	12	71	0	0	83	177	0
Total	28	0	39	0	67	0	497	16	0	513	1	0	1	0	2	40	378	0	0	418	1000	0
14:00	6	0	10	0	16	0	76	10	0	86	1	0	0	0	1	12	79	0	0	91	194	0
14:15	13	0	8	0	21	0	93	7	0	100	0	0	0	0	0	8	74	0	0	82	203	0
14:30	7	0	8	0	15	0	111	10	0	121	0	0	0	0	0	13	85	0	0	98	234	0
14:45	13	0	13	0	26	0	139	7	0	146	0	0	0	0	0	9	71	0	0	80	252	0
Total	39	0	39	0	78	0	419	34	0	453	1	0	0	0	1	42	309	0	0	351	883	0
15:00	7	0	7	0	14	0	141	13	0	154	0	0	0	0	0	11	99	0	0	110	278	0
15:15	16	0	8	0	24	0	147	12	0	159	0	0	0	0	0	12	187	0	0	199	382	0
15:30	14	0	17	0	31	0	144	10	0	154	0	0	1	0	1	6	181	0	0	187	373	0
15:45	4	0	6	0	10	0	116	10	0	126	0	0	0	0	0	9	149	0	0	158	294	0
Total	41	0	38	0	79	0	548	45	0	593	0	0	1	0	1	38	616	0	0	654	1327	0
16:00	6	0	4	0	10	0	130	13	0	143	0	0	0	0	0	6	96	0	0	102	255	0
16:15	7	0	7	0	14	0	132	17	0	149	0	1	0	0	1	5	73	0	0	78	242	0
16:30	7	0	15	0	22	0	136	13	0	149	0	0	0	0	0	6	91	0	0	97	268	0
16:45	4	0	10	0	14	0	133	11	0	144	0	0	0	0	0	11	77	0	0	88	246	0
Total	24	0	36	0	60	0	531	54	0	585	0	1	0	0	1	28	337	0	0	365	1011	0
17:00	12	0	9	0	21	0	136	10	0	146	0	0	0	0	0	11	86	0	0	97	264	0
17:15	9	0	8	0	17	0	141	4	0	145	0	0	1	0	1	5	113	0	0	118	281	0
17:30	6	0	2	0	8	0	111	14	0	125	0	0	0	0	0	6	122	0	0	128	261	0
17:45	5	0	8	0	13	0	127	7	0	134	0	0	0	0	0	4	93	0	0	97	244	0
Total	32	0	27	0	59	0	515	35	0	550	0	0	1	0	1	26	414	0	0	440	1050	0
Grand Total	186	0	233	0	419	0	3087	200	0	3287	2	1	3	0	6	205	2485	0	0	2690	6402	0
Apprch %	44.4%	0.0%	55.6%	0.0%		0.0%	93.9%	6.1%	0.0%		33.3%	16.7%	50.0%	0.0%		7.6%	92.4%	0.0%	0.0%			
Total %	2.9%	0.0%	3.6%	0.0%	6.5%	0.0%	48.2%	3.1%	0.0%	51.3%	0.0%	0.0%	0.0%	0.0%	0.1%	3.2%	38.8%	0.0%	0.0%	42.0%	100.0%	

AM PEAK HOUR	Ave Nueva Southbound					Diablo Rd Westbound					Ave Nueva Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
7:15	4	0	14	0	18	0	156	6	0	162	0	0	0	0	0	8	123	0	0	131	311
7:30	3	0	18	0	21	0	130	2	0	132	0	0	0	0	0	9	93	0	0	102	255
7:45	8	0	11	0	19	0	135	5	0	140	0	0	0	0	0	9	150	0	0	159	318
8:00	10	0	14	0	24	0	172	5	0	177	0	0	1	0	1	8	121	0	0	129	331
Total Volume	25	0	57	0	82	0	593	18	0	611	0	0	1	0	1	34	487	0	0	521	1215
% App Total	30.5%	0.0%	69.5%	0.0%		0.0%	97.1%	2.9%	0.0%		0.0%	0.0%	100.0%	0.0%		6.5%	93.5%	0.0%	0.0%		
PHF	.625	.000	.792	.000	.854	.000	.862	.750	.000	.863	.000	.000	.250	.000	.250	.944	.812	.000	.000	.819	.918

NOON PEAK	Ave Nueva Southbound					Diablo Rd Westbound					Ave Nueva Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	7	0	7	0	14	0	141	13	0	154	0	0	0	0	0	11	99	0	0	110	278
15:15	16	0	8	0	24	0	147	12	0	159	0	0	0	0	0	12	187	0	0	199	382
15:30	14	0	17	0	31	0	144	10	0	154	0	0	1	0	1	6	181	0	0	187	373
15:45	4	0	6	0	10	0	116	10	0	126	0	0	0	0	0	9	149	0	0	158	294
Total Volume	41	0	38	0	79	0	548	45	0	593	0	0	1	0	1	38	616	0	0	654	1327
% App Total	51.9%	0.0%	48.1%	0.0%		0.0%	92.4%	7.6%	0.0%		0.0%	0.0%	100.0%	0.0%		5.8%	94.2%	0.0%	0.0%		
PHF	.641	.000	.559	.000	.637	.000	.932	.865	.000	.932	.000	.000	.250	.000	.250	.792	.824	.000	.000	.822	.868

PM PEAK HOUR	Ave Nueva Southbound					Diablo Rd Westbound					Ave Nueva Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	7	0	15	0	22	0	136	13	0	149	0	0	0	0	0	6	91	0	0	97	268
16:45	4	0	10	0	14	0	133	11	0	144	0	0	0	0	0	11	77	0	0	88	246
17:00	12	0	9	0	21	0	136	10	0	146	0	0	0	0	0	11	86	0	0	97	264
17:15	9	0	8	0	17	0	141	4	0	145	0	0	1	0	1	5	113	0	0	118	281
Total Volume	32	0	42	0	74	0	546	38	0	584	0	0	1	0	1	33	367	0	0	400	1059
% App Total	43.2%	0.0%	56.8%	0.0%		0.0%	93.5%	6.5%	0.0%		0.0%	0.0%	100.0%	0.0%		8.3%	91.8%	0.0%	0.0%		
PHF	.667	.000	.700	.000	.841	.000	.968	.731	.000	.980	.000	.000	.250	.000	.250	.750	.812	.000	.000	.847	.942

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7207-015 Ave Nueva & Diablo Rd
Date : 3/30/2017

Bank 1 Count = Bikes & Peds

	Ave Nueva Southbound					Diablo Rd Westbound					Ave Nueva Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0
7:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	2	3	1
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
14:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	0
15:00	1	0	0	0	1	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	3	0
15:15	2	0	0	0	2	0	0	4	1	4	0	0	0	0	0	0	0	0	0	0	6	1
15:30	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	2	0
15:45	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Total	5	0	0	0	5	0	1	7	1	8	0	0	0	0	0	0	0	0	0	0	13	1
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
16:15	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:30	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	0	2	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	4	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
17:15	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:30	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	0	2	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	4	0
Grand Total	11	0	0	0	11	0	1	10	4	11	0	0	0	0	0	0	4	0	0	4	26	4
Apprch %	100.0%	0.0%	0.0%			0.0%	9.1%	90.9%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%				
Total %	42.3%	0.0%	0.0%		42.3%	0.0%	3.8%	38.5%		42.3%	0.0%	0.0%	0.0%		0.0%	0.0%	15.4%	0.0%		15.4%	100.0%	

AM PEAK HOUR	Ave Nueva Southbound					Diablo Rd Westbound					Ave Nueva Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
7:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	1
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.250	.000		.250	.250

NOON PEAK	Ave Nueva Southbound					Diablo Rd Westbound					Ave Nueva Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	1	0	0	0	1	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	3
15:15	2	0	0	0	2	0	0	4	1	4	0	0	0	0	0	0	0	0	0	0	6
15:30	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	2
15:45	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	5	0	0	0	5	0	1	7	1	8	0	0	0	0	0	0	0	0	0	0	13
% App Total	100.0%	0.0%	0.0%			0.0%	12.5%	87.5%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.625	.000	.000		.625	.000	.250	.438		.500	.000	.000	.000		.000	.000	.000	.000		.000	.542

PM PEAK HOUR	Ave Nueva Southbound					Diablo Rd Westbound					Ave Nueva Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
17:15	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	2	0	0	0	2	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	4
% App Total	100.0%	0.0%	0.0%			0.0%	0.0%	100.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.500	.000	.000		.500	.000	.000	.250		.250	.000	.000	.000		.000	.000	.250	.000		.250	.500

Ave Nueva & Diablo Rd

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-015

Peak Hour Summary	
AM Peak Hour	07:15 - 08:15
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	16:30 - 17:30

Southbound Approach

Ave Nueva

AM	57	0	25	0	52	AM
NOON	38	0	41	0	83	NOON
PM	42	0	32	0	71	PM

Eastbound Approach

Diablo Rd

	AM	NOON	PM
	650	586	588
	0	0	0
	34	38	33
	487	616	367
	0	0	0
	AM	NOON	PM

Westbound Approach

	AM	NOON	PM
	18	45	38
	593	548	546
	0	0	0
	0	0	0
	513	658	400
	AM	NOON	PM

CONTROL

Northbound Approach

AM	0	0	0	0	1	AM
NOON	0	0	0	0	1	NOON
PM	0	0	0	0	1	PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	82	52	AM
	79	83	NOON
	74	71	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
650	586	588		611	593	584
521	654	400		513	658	400

	South Leg	
AM	0	1
NOON	0	1
PM	0	1

Total Volume Per Leg

	North Leg	
	134	AM
	162	NOON
	145	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
1171	1240	988		1124	1251	984

	South Leg
AM	1
NOON	1
PM	1

Ave Nueva & Diablo Rd

Date: 3/30/2017

Day: Thursday

Project #: 17-7207-015

Peak Hour Summary	
AM Peak Hour	07:15 - 08:15
NOON Peak Hour	15:00 - 16:00
PM Peak Hour	16:30 - 17:30

Southbound Approach (Ave Nueva)

AM	0	0	0	0	0	AM
NOON	0	0	5	0	7	NOON
PM	0	0	2	0	1	PM

Eastbound Approach (Diablo Rd)

AM	NOON	PM
0	1	0
0	0	0
0	0	0
1	0	1
0	0	0
AM	NOON	PM

Westbound Approach

AM	NOON	PM
0	7	1
0	1	0
0	0	0
0	0	0
1	5	3
AM	NOON	PM

CONTROL

Northbound Approach

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	2:00 PM	4:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

North Leg		
0	0	AM
5	7	NOON
2	1	PM

West Leg		
AM	NOON	PM
0	1	0
1	0	1

East Leg		
0	8	1
1	5	3
AM	NOON	PM

South Leg		
0	0	AM
0	0	NOON
0	0	PM

Total Volume Per Leg

North Leg	
0	AM
12	NOON
3	PM

West Leg		
AM	NOON	PM
1	1	1

East Leg		
1	13	4
AM	NOON	PM

South Leg	
0	AM
0	NOON
0	PM

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Peds & Bikes On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7438-001 Green Valley Rd/McCauley Rd & Diablo Rd
Date : 5/13/2017

Unshifted Count = All Vehicles & Uturns

	Green Valley Rd/McCauley Rd Southbound					Diablo Rd Westbound					Green Valley Rd/McCauley Rd Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
9:45	23	1	55	0	79	1	91	22	0	114	13	2	5	0	20	46	66	12	0	124	337	0
10:00	20	1	56	0	77	2	66	17	0	85	9	3	2	0	14	46	67	18	0	131	307	0
10:15	19	2	64	0	85	0	94	18	0	112	13	2	2	0	17	36	51	12	0	99	313	0
10:30	15	2	59	0	76	1	110	27	0	138	17	1	4	0	22	35	68	15	0	118	354	0
Total	77	6	234	0	317	4	361	84	0	449	52	8	13	0	73	163	252	57	0	472	1311	0
10:45	20	2	79	0	101	5	74	24	0	103	15	2	3	0	20	47	86	16	0	149	373	0
11:00	25	4	49	0	78	1	92	14	0	107	20	3	0	0	23	60	84	10	0	154	362	0
11:15	16	4	63	0	83	0	85	26	0	111	12	2	1	0	15	51	79	11	0	141	350	0
11:30	23	2	57	0	82	4	81	17	0	102	22	4	5	0	31	52	73	12	0	137	352	0
Total	84	12	248	0	344	10	332	81	0	423	69	11	9	0	89	210	322	49	0	581	1437	0
Grand Total	161	18	482	0	661	14	693	165	0	872	121	19	22	0	162	373	574	106	0	1053	2748	0
Apprch %	24.4%	2.7%	72.9%	0.0%		1.6%	79.5%	18.9%	0.0%		74.7%	11.7%	13.6%	0.0%		35.4%	54.5%	10.1%	0.0%			
Total %	5.9%	0.7%	17.5%	0.0%	24.1%	0.5%	25.2%	6.0%	0.0%	31.7%	4.4%	0.7%	0.8%	0.0%	5.9%	13.6%	20.9%	3.9%	0.0%	38.3%	100.0%	

AM PEAK HOUR	Green Valley Rd/McCauley Rd Southbound					Diablo Rd Westbound					Green Valley Rd/McCauley Rd Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 10:30 to 11:30																					
Peak Hour For Entire Intersection Begins at 10:30																					
10:30	15	2	59	0	76	1	110	27	0	138	17	1	4	0	22	35	68	15	0	118	354
10:45	20	2	79	0	101	5	74	24	0	103	15	2	3	0	20	47	86	16	0	149	373
11:00	25	4	49	0	78	1	92	14	0	107	20	3	0	0	23	60	84	10	0	154	362
11:15	16	4	63	0	83	0	85	26	0	111	12	2	1	0	15	51	79	11	0	141	350
Total Volume	76	12	250	0	338	7	361	91	0	459	64	8	8	0	80	193	317	52	0	562	1439
% App Total	22.5%	3.6%	74.0%	0.0%		1.5%	78.6%	19.8%	0.0%		80.0%	10.0%	10.0%	0.0%		34.3%	56.4%	9.3%	0.0%		
PHF	.760	.750	.791	.000	.837	.350	.820	.843	.000	.832	.800	.667	.500	.000	.870	.804	.922	.813	.000	.912	.964

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Peds & Bikes On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7438-001 Green Valley Rd/McCauley Rd & Diablo Rd
Date : 5/13/2017

Bank 1 Count = Peds & Bikes

	Green Valley Rd/McCauley Rd Southbound					Diablo Rd Westbound					Green Valley Rd/McCauley Rd Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
9:45	1	0	0	0	1	0	5	1	0	6	0	0	0	0	0	2	16	0	0	18	25	0
10:00	3	0	1	0	4	0	15	0	0	15	0	0	0	0	0	4	5	0	0	9	28	0
10:15	2	0	1	2	3	0	9	0	0	9	0	0	0	0	0	0	4	0	1	4	16	3
10:30	8	0	2	1	10	0	5	3	0	8	0	0	0	0	0	1	4	0	0	5	23	1
Total	14	0	4	3	18	0	34	4	0	38	0	0	0	0	0	7	29	0	1	36	92	4
10:45	0	0	0	0	0	0	4	2	1	6	0	0	0	1	0	0	3	0	1	3	9	3
11:00	2	0	3	2	5	0	8	2	1	10	0	0	0	1	0	1	1	0	0	2	17	4
11:15	0	0	4	1	4	0	3	1	2	4	0	0	0	2	0	3	20	0	0	23	31	5
11:30	4	1	2	0	7	0	7	2	0	9	0	0	0	0	0	3	6	0	1	9	25	1
Total	6	1	9	3	16	0	22	7	4	29	0	0	0	4	0	7	30	0	2	37	82	13
Grand Total	20	1	13	6	34	0	56	11	4	67	0	0	0	4	0	14	59	0	3	73	174	17
Apprch %	58.8%	2.9%	38.2%			0.0%	83.6%	16.4%			0.0%	0.0%	0.0%			19.2%	80.8%	0.0%				
Total %	11.5%	0.6%	7.5%		19.5%	0.0%	32.2%	6.3%		38.5%	0.0%	0.0%	0.0%		0.0%	8.0%	33.9%	0.0%		42.0%	100.0%	

AM PEAK HOUR	Green Valley Rd/McCauley Rd Southbound					Diablo Rd Westbound					Green Valley Rd/McCauley Rd Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 10:30 to 11:30																					
Peak Hour For Entire Intersection Begins at 10:30																					
10:30	8	0	2	1	10	0	5	3	0	8	0	0	0	0	0	1	4	0	0	5	23
10:45	0	0	0	0	0	0	4	2	1	6	0	0	0	1	0	0	3	0	1	3	9
11:00	2	0	3	2	5	0	8	2	1	10	0	0	0	1	0	1	1	0	0	2	17
11:15	0	0	4	1	4	0	3	1	2	4	0	0	0	2	0	3	20	0	0	23	31
Total Volume	10	0	9	4	19	0	20	8	4	28	0	0	0	4	0	5	28	0	1	33	80
% App Total	52.6%	0.0%	47.4%			0.0%	71.4%	28.6%			0.0%	0.0%	0.0%			15.2%	84.8%	0.0%			
PHF	.313	.000	.563		.475	.000	.625	.667		.700	.000	.000	.000		.000	.417	.350	.000		.359	.645

Green Valley Rd/McCauley Rd & Diablo Rd

Date: 5/13/2017

Day: Saturday

Project #: 17-7438-001

AM Peak Hour	10:30 - 11:30
NOON Peak Hour	
PM Peak Hour	

Peak Hour Summary

Southbound Approach

Green Valley Rd/McCau

AM	250	12	76	0	292	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

Diablo Rd

Eastbound Approach

AM	NOON	PM
675	0	0
0	0	0
193	0	0
317	0	0
52	0	0
AM	NOON	PM

Westbound Approach

AM	NOON	PM
91	0	0
361	0	0
7	0	0
0	0	0
401	0	0
AM	NOON	PM

CONTROL

Northbound Approach

AM	71	0	64	8	8	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

Count Periods	Start	End
AM	9:45 AM	11:45 AM
NOON	NONE	NONE
PM	NONE	NONE

Total Ins & Outs

			North Leg					
			338	292	AM			
			0	0	NOON			
			0	0	PM			
AM	NOON	PM				East Leg		
675	0	0				459	0	0
562	0	0				401	0	0
West Leg						AM	NOON	PM
			71	80	AM			
			0	0	NOON			
			0	0	PM			
			South Leg					

Total Volume Per Leg

			North Leg					
			630	AM				
			0	NOON				
			0	PM				
AM	NOON	PM				East Leg		
1237	0	0				860	0	0
West Leg						AM	NOON	PM
			151	AM				
			0	NOON				
			0	PM				
			South Leg					

Green Valley Rd/McCauley Rd & Diablo Rd

Date: 5/13/2017

Day: Saturday

Project #: 17-7438-001

AM Peak Hour	10:30 - 11:30
NOON Peak Hour	
PM Peak Hour	

Peak Hour Summary

Southbound Approach (Green Valley Rd/McCau)

AM	9	0	10	0	13
NOON	0	0	0	0	0
PM	0	0	0	0	0

Eastbound Approach (Diablo Rd)

AM	NOON	PM
29	0	0
0	0	0
5	0	0
28	0	0
0	0	0

Westbound Approach

AM	NOON	PM
8	0	0
20	0	0
0	0	0
0	0	0
38	0	0

CONTROL

Northbound Approach

AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	0	0	0	0	0

Count Periods	Start	End
AM	9:45 AM	11:45 AM
NOON	NONE	NONE
PM	NONE	NONE

Total Ins & Outs

	North Leg		
	19	13	AM
	0	0	NOON
	0	0	PM

West Leg AM	NOON	PM	East Leg AM	NOON	PM
29	0	0	28	0	0
33	0	0	38	0	0

	South Leg	
AM	0	0
NOON	0	0
PM	0	0

Total Volume Per Leg

	North Leg
AM	32
NOON	0
PM	0

West Leg AM	NOON	PM	East Leg AM	NOON	PM
62	0	0	66	0	0

	South Leg
AM	0
NOON	0
PM	0

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7203-001 Mt Diablo Scenic Blvd & Diablo Rd/Blackhawk Rd
Date : 3/11/2017

Unshifted Count = All Vehicles & Uturns

	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	0	1	0	1	0	23	0	0	23	0	0	0	0	0	4	17	0	0	21	45	0
7:15	2	0	2	0	4	0	15	0	0	15	0	0	0	0	0	4	19	0	0	23	42	0
7:30	2	0	1	0	3	0	30	2	0	32	0	0	0	0	0	9	14	0	0	23	58	0
7:45	1	0	0	0	1	0	35	3	0	38	0	0	0	0	0	7	23	0	0	30	69	0
Total	5	0	4	0	9	0	103	5	0	108	0	0	0	0	0	24	73	0	0	97	214	0
8:00	2	0	2	0	4	0	31	5	0	36	0	0	0	0	0	15	29	0	0	44	84	0
8:15	3	0	2	0	5	0	25	3	0	28	0	0	0	0	0	20	29	0	0	49	82	0
8:30	8	0	2	0	10	0	43	8	0	51	0	0	0	0	0	32	35	0	0	67	128	0
8:45	4	0	5	0	9	0	42	4	0	46	0	0	0	0	0	24	58	0	0	82	137	0
Total	17	0	11	0	28	0	141	20	0	161	0	0	0	0	0	91	151	0	0	242	431	0
9:00	1	0	2	0	3	0	53	6	0	59	0	0	0	0	0	18	37	0	0	55	117	0
9:15	1	0	2	0	3	0	65	8	0	73	0	0	0	0	0	23	51	0	0	74	150	0
9:30	1	0	4	0	5	0	49	5	0	54	0	0	0	0	0	19	65	0	0	84	143	0
9:45	1	0	0	0	1	0	62	15	0	77	0	0	0	0	0	16	67	0	0	83	161	0
Total	4	0	8	0	12	0	229	34	0	263	0	0	0	0	0	76	220	0	0	296	571	0
10:00	4	0	3	0	7	0	70	10	0	80	0	0	0	0	0	31	45	0	0	76	163	0
10:15	2	0	4	0	6	0	74	6	0	80	0	0	0	0	0	18	46	0	0	64	150	0
10:30	8	0	3	0	11	0	57	7	0	64	0	0	0	0	0	24	54	0	0	78	153	0
10:45	6	0	4	0	10	0	70	4	0	74	0	0	0	0	0	16	64	0	0	80	164	0
Total	20	0	14	0	34	0	271	27	0	298	0	0	0	0	0	89	209	0	0	298	630	0
11:00	6	0	4	0	10	0	49	8	0	57	0	0	0	0	0	37	66	0	0	103	170	0
11:15	5	0	2	0	7	0	85	7	0	92	0	0	0	0	0	32	66	0	0	98	197	0
11:30	3	0	1	0	4	0	77	10	0	87	0	0	0	0	0	38	62	0	0	100	191	0
11:45	4	0	8	0	12	0	56	10	0	66	0	0	0	0	0	32	65	0	0	97	175	0
Total	18	0	15	0	33	0	267	35	0	302	0	0	0	0	0	139	259	0	0	398	733	0
12:00	7	0	11	0	18	0	59	7	0	66	0	0	0	0	0	39	56	0	0	95	179	0
12:15	6	0	9	0	15	0	57	7	0	64	0	0	0	0	0	26	53	0	0	79	158	0
12:30	10	0	11	0	21	0	55	9	0	64	0	0	0	0	0	19	60	0	0	79	164	0
12:45	5	0	4	0	9	0	60	11	0	71	0	0	0	0	0	23	79	0	0	102	182	0
Total	28	0	35	0	63	0	231	34	0	265	0	0	0	0	0	107	248	0	0	355	683	0
13:00	0	0	9	0	9	0	66	9	0	75	0	0	0	0	0	21	63	0	0	84	168	0
13:15	3	0	7	0	10	0	62	7	0	69	0	0	0	0	0	24	54	0	0	78	157	0
13:30	7	0	5	0	12	0	63	5	0	68	0	0	0	0	0	29	38	0	0	67	147	0
13:45	11	0	15	0	26	0	61	14	0	75	0	0	0	0	0	31	58	0	0	89	190	0
Total	21	0	36	0	57	0	252	35	0	287	0	0	0	0	0	105	213	0	0	318	662	0
14:00	11	0	16	0	27	0	70	21	0	91	0	0	0	0	0	29	41	0	0	70	188	0
14:15	11	0	9	0	20	0	70	14	0	84	0	0	0	0	0	21	58	0	0	79	183	0
14:30	4	0	8	0	12	0	78	8	0	86	0	0	0	0	0	16	42	0	0	58	156	0
14:45	7	0	8	0	15	0	74	6	0	80	0	0	0	0	0	19	72	0	0	91	186	0
Total	33	0	41	0	74	0	292	49	0	341	0	0	0	0	0	85	213	0	0	298	713	0
15:00	8	0	15	0	23	0	71	9	0	80	0	0	0	0	0	23	77	0	0	100	203	0
15:15	5	0	9	0	14	0	57	11	0	68	0	0	0	0	0	14	61	0	0	75	157	0
15:30	6	0	11	0	17	0	56	12	0	68	0	0	0	0	0	18	70	0	0	88	173	0
15:45	7	0	7	0	14	0	75	11	0	86	0	0	0	0	0	17	66	0	0	83	183	0
Total	26	0	42	0	68	0	259	43	0	302	0	0	0	0	0	72	274	0	0	346	716	0
16:00	11	0	9	0	20	0	86	1	0	87	0	0	0	0	0	18	72	0	0	90	197	0
16:15	8	0	12	0	20	0	61	4	0	65	0	0	0	0	0	23	68	0	0	91	176	0
16:30	5	0	11	0	16	0	58	13	0	71	0	0	0	0	0	15	73	0	0	88	175	0
16:45	6	0	6	0	12	0	71	2	0	73	0	0	0	0	0	12	74	0	0	86	171	0
Total	30	0	38	0	68	0	276	20	0	296	0	0	0	0	0	68	287	0	0	355	719	0
17:00	16	0	14	0	30	0	79	4	0	83	0	0	0	0	0	20	78	0	0	98	211	0
17:15	3	0	10	0	13	0	58	11	0	69	0	0	0	0	0	9	59	0	0	68	150	0
17:30	18	0	14	0	32	0	67	4	0	71	0	0	0	0	0	14	63	0	0	77	180	0
17:45	16	0	12	0	28	0	69	6	0	75	0	0	0	0	0	13	55	0	0	68	171	0
Total	53	0	50	0	103	0	273	25	0	298	0	0	0	0	0	56	255	0	0	311	712	0
18:00	16	0	14	0	30	0	69	2	0	71	0	0	0	0	0	6	61	0	0	67	168	0
18:15	5	0	10	0	15	0	66	3	0	69	0	0	0	0	0	6	48	0	0	54	138	0
18:30	5	0	9	0	14	0	60	4	0	64	0	0	0	0	0	5	37	0	0	42	120	0
18:45	5	0	7	0	12	0	29	2	0	31	0	0	0	0	0	3	38	0	0	41	84	0
Total	31	0	40	0	71	0	224	11	0	235	0	0	0	0	0	20	184	0	0	204	510	0
Grand Total	286	0	334	0	620	0	2818	338	0	3156	0	0	0	0	0	932	2586	0	0	3518	7294	0
Apprch %	46.1%	0.0%	53.9%	0.0%		0.0%	89.3%	10.7%	0.0%		0.0%	0.0%	0.0%	0.0%		26.5%	73.5%	0.0%	0.0%			
Total %	3.9%	0.0%	4.6%	0.0%	8.5%	0.0%	38.6%	4.6%	0.0%	43.3%	0.0%	0.0%	0.0%	0.0%	0.0%	12.8%	35.5%	0.0%	0.0%	48.2%	100.0%	

AM PEAK HOUR	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 10:45 to 11:45																					
Peak Hour For Entire Intersection Begins at 10:45																					
10:45	6	0	4	0	10	0	70	4	0	74	0	0	0	0	0	16	64	0	0	80	164
11:00	6	0	4	0	10	0	49	8	0	57	0	0	0	0	0	37	66	0	0	103	170
11:15	5	0	2	0	7	0	85	7	0	92	0	0	0	0	0	32	66	0	0	98	197
11:30	3	0	1	0	4	0	77	10	0	87	0	0	0	0	0	38	62	0	0	100	191
Total Volume	20	0	11	0	31	0	281	29	0	310	0	0	0	0	0	123	258	0	0	381	722
% App Total	64.5%	0.0%	35.5%	0.0%		0.0%	90.6%	9.4%	0.0%		0.0%	0.0%	0.0%	0.0%		32.3%	67.7%	0.0%	0.0%		
PHF	.833	.000	.688	.000	.775	.000	.826	.725	.000	.842	.000	.000	.000	.000	.000	.809	.977	.000	.000	.925	.916

NOON PEAK	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 11:15 to 12:15																					
Peak Hour For Entire Intersection Begins at 11:15																					
11:15	5	0	2	0	7	0	85	7	0	92	0	0	0	0	0	32	66	0	0	98	197
11:30	3	0	1	0	4	0	77	10	0	87	0	0	0	0	0	38	62	0	0	100	191
11:45	4	0	8	0	12	0	56	10	0	66	0	0	0	0	0	32	65	0	0	97	175
12:00	7	0	11	0	18	0	59	7	0	66	0	0	0	0	0	39	56	0	0	95	179
Total Volume	19	0	22	0	41	0	277	34	0	311	0	0	0	0	0	141	249	0	0	390	742
% App Total	46.3%	0.0%	53.7%	0.0%		0.0%	89.1%	10.9%	0.0%		0.0%	0.0%	0.0%	0.0%		36.2%	63.8%	0.0%	0.0%		
PHF	.679	.000	.500	.000	.569	.000	.815	.850	.000	.845	.000	.000	.000	.000	.000	.904	.943	.000	.000	.975	.942

PM PEAK HOUR	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:15 to 17:15																					
Peak Hour For Entire Intersection Begins at 16:15																					
16:15	8	0	12	0	20	0	61	4	0	65	0	0	0	0	0	23	68	0	0	91	176
16:30	5	0	11	0	16	0	58	13	0	71	0	0	0	0	0	15	73	0	0	88	175
16:45	6	0	6	0	12	0	71	2	0	73	0	0	0	0	0	12	74	0	0	86	171
17:00	16	0	14	0	30	0	79	4	0	83	0	0	0	0	0	20	78	0	0	98	211
Total Volume	35	0	43	0	78	0	269	23	0	292	0	0	0	0	0	70	293	0	0	363	733
% App Total	44.9%	0.0%	55.1%	0.0%		0.0%	92.1%	7.9%	0.0%		0.0%	0.0%	0.0%	0.0%		19.3%	80.7%	0.0%	0.0%		
PHF	.547	.000	.768	.000	.650	.000	.851	.442	.000	.880	.000	.000	.000	.000	.000	.761	.939	.000	.000	.926	.868

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7203-001 Mt Diablo Scenic Blvd & Diablo Rd/Blackhawk Rd
Date : 3/11/2017

Bank 1 Count = Bikes

	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:30	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	4	1	0	0	5	10	0
7:45	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0	0	0	4	8	0
Total	1	0	0	0	1	0	0	9	0	9	0	0	0	0	0	8	1	0	0	9	19	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	3	2	0	5	0	0	0	0	0	5	1	0	0	6	11	0
8:30	0	0	0	0	0	0	1	3	0	4	0	0	0	0	0	1	3	0	0	4	8	0
8:45	0	0	0	0	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	9	0
Total	0	0	0	0	0	0	4	14	0	18	0	0	0	0	0	6	4	0	0	10	28	0
9:00	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	4	2	0	0	6	9	0
9:15	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	3	0	0	0	3	5	0
9:30	2	0	0	0	2	0	3	2	0	5	0	0	0	0	0	12	0	0	0	12	19	0
9:45	8	0	1	0	9	0	2	3	0	5	0	0	0	0	0	5	10	0	0	15	29	0
Total	10	0	1	0	11	0	8	7	0	15	0	0	0	0	0	24	12	0	0	36	62	0
10:00	0	0	1	0	1	0	4	12	0	16	0	0	0	0	0	7	2	0	0	9	26	0
10:15	6	0	0	0	6	0	3	1	0	4	0	0	0	0	0	3	0	0	0	3	13	0
10:30	6	0	0	0	6	0	1	10	0	11	0	0	0	0	0	1	0	0	0	1	18	0
10:45	8	0	0	0	8	0	1	3	0	4	0	0	0	0	0	3	1	0	0	4	16	0
Total	20	0	1	0	21	0	9	26	0	35	0	0	0	0	0	14	3	0	0	17	73	0
11:00	8	0	0	0	8	0	0	7	0	7	0	0	0	0	0	2	1	0	0	3	18	0
11:15	11	0	1	0	12	0	3	2	0	5	0	0	0	0	0	15	1	0	0	16	33	0
11:30	2	0	0	0	2	0	1	0	0	1	0	0	0	0	0	2	0	0	0	2	5	0
11:45	4	0	0	0	4	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	6	0
Total	25	0	1	0	26	0	4	10	0	14	0	0	0	0	0	19	3	0	0	22	62	0
12:00	4	0	0	0	4	0	0	6	0	6	0	0	0	0	0	0	2	0	0	2	12	0
12:15	2	0	0	0	2	0	0	1	0	1	0	0	0	0	0	2	0	0	0	2	5	0
12:30	1	0	0	0	1	0	1	1	0	2	0	0	0	0	0	0	1	0	0	1	4	0
12:45	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	0	0	1	3	0
Total	7	0	0	0	7	0	1	10	0	11	0	0	0	0	0	3	3	0	0	6	24	0
13:00	3	0	0	0	3	0	0	5	0	5	0	0	0	0	0	0	2	0	0	2	10	0
13:15	2	0	0	0	2	0	3	2	0	5	0	0	0	0	0	0	1	0	0	1	8	0
13:30	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	4	0	0	4	7	0
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
Total	5	0	0	0	5	0	5	8	0	13	0	0	0	0	0	0	8	0	0	8	26	0
14:00	1	0	0	0	1	0	2	2	0	4	0	0	0	0	0	0	1	0	0	1	6	0
14:15	1	0	0	0	1	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	3	0
14:30	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	0	2	0	0	2	6	0
14:45	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	3	3	0	0	6	8	0
Total	3	0	0	0	3	0	5	6	0	11	0	0	0	0	0	3	6	0	0	9	23	0
15:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	3	0	0	3	4	0
15:15	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
15:30	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	5	0
15:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	2	0	0	0	2	0	0	6	0	6	0	0	0	0	0	0	3	0	0	3	11	0
16:00	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	4	0
16:15	2	0	1	0	3	0	1	0	0	1	0	0	0	0	0	1	2	0	0	3	7	0
16:30	1	0	0	0	1	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	3	0
16:45	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3	0
Total	6	0	1	0	7	0	4	2	0	6	0	0	0	0	0	1	3	0	0	4	17	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:30	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	4	0
Grand Total	80	0	4	0	84	0	43	98	0	141	0	0	0	0	0	78	46	0	0	124	349	0
Apprch %	95.2%	0.0%	4.8%			0.0%	30.5%	69.5%			0.0%	0.0%	0.0%			62.9%	37.1%	0.0%				
Total %	22.9%	0.0%	1.1%		24.1%	0.0%	12.3%	28.1%		40.4%	0.0%	0.0%	0.0%		0.0%	22.3%	13.2%	0.0%		35.5%	100.0%	

AM PEAK HOUR	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 10:45 to 11:45																					
Peak Hour For Entire Intersection Begins at 10:45																					
10:45	8	0	0	0	8	0	1	3	0	4	0	0	0	0	0	3	1	0	0	4	16
11:00	8	0	0	0	8	0	0	7	0	7	0	0	0	0	0	2	1	0	0	3	18
11:15	11	0	1	0	12	0	3	2	0	5	0	0	0	0	0	15	1	0	0	16	33
11:30	2	0	0	0	2	0	1	0	0	1	0	0	0	0	0	2	0	0	0	2	5
Total Volume	29	0	1	0	30	0	5	12	0	17	0	0	0	0	0	22	3	0	0	25	72
% App Total	96.7%	0.0%	3.3%			0.0%	29.4%	70.6%			0.0%	0.0%	0.0%			88.0%	12.0%	0.0%			
PHF	.659	.000	.250		.625	.000	.417	.429		.607	.000	.000	.000		.000	.367	.750	.000		.391	.545

NOON PEAK	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 11:15 to 12:15																					
Peak Hour For Entire Intersection Begins at 11:15																					
11:15	11	0	1	0	12	0	3	2	0	5	0	0	0	0	0	15	1	0	0	16	33
11:30	2	0	0	0	2	0	1	0	0	1	0	0	0	0	0	2	0	0	0	2	5
11:45	4	0	0	0	4	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	6
12:00	4	0	0	0	4	0	0	6	0	6	0	0	0	0	0	0	2	0	0	2	12
Total Volume	21	0	1	0	22	0	4	9	0	13	0	0	0	0	0	17	4	0	0	21	56
% App Total	95.5%	0.0%	4.5%			0.0%	30.8%	69.2%			0.0%	0.0%	0.0%			81.0%	19.0%	0.0%			
PHF	.477	.000	.250		.458	.000	.333	.375		.542	.000	.000	.000		.000	.283	.500	.000		.328	.424

PM PEAK HOUR	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:15 to 17:15																					
Peak Hour For Entire Intersection Begins at 16:15																					
16:15	2	0	1	0	3	0	1	0	0	1	0	0	0	0	0	1	2	0	0	3	7
16:30	1	0	0	0	1	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	3
16:45	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	5	0	1	0	6	0	1	2	0	3	0	0	0	0	0	1	3	0	0	4	13
% App Total	83.3%	0.0%	16.7%			0.0%	33.3%	66.7%			0.0%	0.0%	0.0%			25.0%	75.0%	0.0%			
PHF	.625	.000	.250		.500	.000	.250	.250		.375	.000	.000	.000		.000	.250	.375	.000		.333	.464

Mt Diablo Scenic Blvd & Diablo Rd/Blackhawk Rd

Date: 3/11/2017

Day: Saturday

Project #: 17-7203-001

Peak Hour Summary	
AM Peak Hour	10:45 - 11:45
NOON Peak Hour	11:15 - 12:15
PM Peak Hour	16:15 - 17:15

Southbound Approach

Mt Diablo Scenic Blvd

AM	11	0	20	0	152	AM
NOON	22	0	19	0	175	NOON
PM	43	0	35	0	93	PM

Eastbound Approach

Diablo Rd/Blackhawk Rd

	AM	NOON	PM
	292	299	312
	0	0	0
	123	141	70
	258	249	293
	0	0	0
	AM	NOON	PM

Westbound Approach

	AM	NOON	PM
	29	34	23
	281	277	269
	0	0	0
	0	0	0
	278	268	328
	AM	NOON	PM

CONTROL

Count Periods	Start	End
AM	7:00 AM	11:00 AM
NOON	11:00 AM	3:00 PM
PM	3:00 PM	7:00 PM

Northbound Approach

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

Total Ins & Outs

North Leg		
31	152	AM
41	175	NOON
78	93	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
292	299	312		310	311	292
381	390	363		278	268	328

South Leg		
0	0	AM
0	0	NOON
0	0	PM

Total Volume Per Leg

North Leg	
183	AM
216	NOON
171	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
673	689	675		588	579	620

South Leg	
0	AM
0	NOON
0	PM

Mt Diablo Scenic Blvd & Diablo Rd/Blackhawk Rd

Date: 3/11/2017

Day: Saturday

Project #: 17-7203-001

AM Peak Hour	10:45 - 11:45
NOON Peak Hour	11:15 - 12:15
PM Peak Hour	16:15 - 17:15

Peak Hour Summary

Southbound Approach (Mt Diablo Scenic Blvd)

AM	1	0	29	0	34
NOON	1	0	21	0	26
PM	1	0	5	0	3

Eastbound Approach (Diablo Rd/Blackhawk Rd)

	AM	NOON	PM
	6	5	2
	0	0	0
	22	17	1
	3	4	3
	0	0	0

Westbound Approach

	AM	NOON	PM
	12	9	2
	5	4	1
	0	0	0
	0	0	0
	32	25	8

CONTROL

Northbound Approach

AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	0	0	0	0	0

Count Periods	Start	End
AM	7:00 AM	11:00 AM
NOON	11:00 AM	3:00 PM
PM	3:00 PM	7:00 PM

Total Ins & Outs

	North Leg			East Leg			West Leg			South Leg	
	30	34	AM	17	13	3	6	5	2	0	0
	22	26	NOON	32	25	8	25	21	4	0	0
	6	3	PM	AM	NOON	PM	AM	NOON	PM	0	0

Total Volume Per Leg

	North Leg			East Leg			West Leg			South Leg
	64	AM	49	38	11	31	26	6	AM	0
	48	NOON	AM	NOON	PM	AM	NOON	PM	NOON	0
	9	PM							PM	0

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7203-101 Mt Diablo Scenic Blvd & Diablo Rd/Blackhawk Rd
Date : 3/11/2017

Unshifted Count = All Vehicles & Uturns

	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:15	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
7:30	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
7:45	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
Total	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0
8:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
8:45	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0
Total	0	0	16	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0
9:00	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
9:15	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
9:30	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
9:45	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
Total	0	0	21	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0
10:00	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
10:15	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
10:30	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
10:45	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0
Total	0	0	25	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0
11:00	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
11:15	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0
11:30	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
11:45	0	0	22	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0
Total	0	0	46	0	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46	0
12:00	0	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0
12:15	0	0	15	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0
12:30	0	0	15	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0
12:45	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0
Total	0	0	51	0	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51	0
13:00	0	0	15	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0
13:15	0	0	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0
13:30	0	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0
13:45	0	0	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0
Total	0	0	52	0	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52	0
14:00	0	0	25	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0
14:15	0	0	43	0	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	0
14:30	0	0	20	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
14:45	0	0	17	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0
Total	0	0	105	0	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	105	0
15:00	0	0	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0
15:15	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
15:30	0	0	19	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0
15:45	0	0	14	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0
Total	0	0	53	0	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53	0
16:00	0	0	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0
16:15	0	0	20	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
16:30	0	0	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0
16:45	0	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0
Total	0	0	55	0	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55	0
17:00	0	0	23	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0
17:15	0	0	15	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0
17:30	0	0	15	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0
17:45	0	0	27	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0
Total	0	0	80	0	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0
18:00	0	0	19	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0
18:15	0	0	15	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0
18:30	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0
18:45	0	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0
Total	0	0	55	0	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55	0
Grand Total	0	0	568	0	568	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	568	0
Apprch %	0.0%	0.0%	100.0%	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%			
Total %	0.0%	0.0%	100.0%	0.0%	100.0%	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%	100.0%	

AM PEAK HOUR	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 10:45 to 11:45																					
Peak Hour For Entire Intersection Begins at 10:45																					
10:45	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
11:00	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
11:15	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
11:30	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Total Volume	0	0	34	0	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
% App Total	0.0%	0.0%	100.0%	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%		
PHF	.000	.000	.850	.000	.850	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.850

NOON PEAK	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 14:00 to 15:00																					
Peak Hour For Entire Intersection Begins at 14:00																					
14:00	0	0	25	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
14:15	0	0	43	0	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
14:30	0	0	20	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
14:45	0	0	17	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Total Volume	0	0	105	0	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	105
% App Total	0.0%	0.0%	100.0%	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%		
PHF	.000	.000	.610	.000	.610	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.610

PM PEAK HOUR	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	23	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
17:15	0	0	15	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
17:30	0	0	15	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
17:45	0	0	27	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Total Volume	0	0	80	0	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80
% App Total	0.0%	0.0%	100.0%	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%		
PHF	.000	.000	.741	.000	.741	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.741

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7203-101 Mt Diablo Scenic Blvd & Diablo Rd/Blackhawk Rd
Date : 3/11/2017

Bank 1 Count = Bikes

	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:30	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
8:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	0
9:30	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
9:45	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Total	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	6	0
10:00	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
10:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
10:30	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
10:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0
11:00	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
11:15	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
11:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
11:45	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
Total	0	0	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0
12:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:15	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
12:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0
13:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Total	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
14:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0
14:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3	0
15:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Total	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Grand Total	0	0	43	0	43	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	46	0
Apprch %	0.0%	0.0%	100.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			100.0%	0.0%	0.0%				
Total %	0.0%	0.0%	93.5%		93.5%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	6.5%	0.0%	0.0%		6.5%	100.0%	

AM PEAK HOUR	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 10:45 to 11:45																					
Peak Hour For Entire Intersection Begins at 10:45																					
10:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:00	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
11:15	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
11:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
% App Total	0.0%	0.0%	100.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.667		.667	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.667

NOON PEAK	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 14:00 to 15:00																					
Peak Hour For Entire Intersection Begins at 14:00																					
14:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
14:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3
% App Total	0.0%	0.0%	100.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			
PHF	.000	.000	.500		.500	.000	.000	.000		.000	.000	.000	.000		.000	.250	.000	.000		.250	.750

PM PEAK HOUR	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000

Mt Diablo Scenic Blvd & Diablo Rd/Blackhawk Rd

Date: 3/11/2017

Day: Saturday

Project #: 17-7203-101

Peak Hour Summary	
AM Peak Hour	10:45 - 11:45
NOON Peak Hour	14:00 - 15:00
PM Peak Hour	17:00 - 18:00

Southbound Approach

Mt Diablo Scenic Blvd

AM	34	0	0	0	0	AM
NOON	105	0	0	0	0	NOON
PM	80	0	0	0	0	PM

Eastbound Approach

Diablo Rd/Blackhawk Rd

AM	NOON	PM
34	105	80
0	0	0
0	0	0
0	0	0
0	0	0
AM	NOON	PM

Westbound Approach

AM	NOON	PM
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
AM	NOON	PM

CONTROL

Northbound Approach

AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	0	0	0	0	PM

Count Periods	Start	End
AM	7:00 AM	11:00 AM
NOON	11:00 AM	3:00 PM
PM	3:00 PM	7:00 PM

Total Ins & Outs

North Leg		
34	0	AM
105	0	NOON
80	0	PM

West Leg			East Leg		
AM	NOON	PM			
34	105	80	0	0	0
0	0	0	0	0	0
			AM	NOON	PM

South Leg		
0	0	AM
0	0	NOON
0	0	PM

Total Volume Per Leg

North Leg	
34	AM
105	NOON
80	PM

West Leg			East Leg		
AM	NOON	PM			
34	105	80	0	0	0
			AM	NOON	PM

South Leg	
0	AM
0	NOON
0	PM

Mt Diablo Scenic Blvd & Diablo Rd/Blackhawk Rd

Date: 3/11/2017

Day: Saturday

Project #: 17-7203-101

AM Peak Hour	10:45 - 11:45
NOON Peak Hour	14:00 - 15:00
PM Peak Hour	17:00 - 18:00

Peak Hour Summary

Southbound Approach (Mt Diablo Scenic Blvd)

AM	8	0	0	0	0 AM
NOON	2	0	0	0	1 NOON
PM	0	0	0	0	0 PM

Eastbound Approach (Diablo Rd/Blackhawk Rd)

	AM	NOON	PM
	8	2	0
	0	0	0
	0	1	0
	0	0	0
	0	0	0
AM	NOON	PM	

Westbound Approach

	AM	NOON	PM
	0	0	0
	0	0	0
	0	0	0
	0	0	0
	0	0	0
AM	NOON	PM	

CONTROL

Northbound Approach

AM	0	0	0	0	0 AM
NOON	0	0	0	0	0 NOON
PM	0	0	0	0	0 PM

Count Periods	Start	End
AM	7:00 AM	11:00 AM
NOON	11:00 AM	3:00 PM
PM	3:00 PM	7:00 PM

Total Ins & Outs

	North Leg		
	8	0	AM
	2	1	NOON
	0	0	PM

West Leg AM	NOON	PM	East Leg AM	NOON	PM
8	2	0	0	0	0
0	1	0	0	0	0

	South Leg	
AM	0	0
NOON	0	0
PM	0	0

Total Volume Per Leg

	North Leg
AM	8
NOON	3
PM	0

West Leg AM	NOON	PM	East Leg AM	NOON	PM
8	3	0	0	0	0

	South Leg
AM	0
NOON	0
PM	0

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7203-001 Mt Diablo Scenic Blvd & Diablo Rd/Blackhawk Rd
Date : 3/12/2017

Unshifted Count = All Vehicles & Uturns

	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	1	6	0	0	7	19	0
7:15	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	1	4	0	0	5	23	0
7:30	1	0	2	0	3	0	12	0	0	12	0	0	0	0	0	2	10	0	0	12	27	0
7:45	0	0	1	0	1	0	27	2	0	29	0	0	0	0	0	6	16	0	0	22	52	0
Total	1	0	3	0	4	0	69	2	0	71	0	0	0	0	0	10	36	0	0	46	121	0
8:00	2	0	0	0	2	0	24	4	0	28	0	0	0	0	0	7	12	0	0	19	49	0
8:15	3	0	1	0	4	0	25	5	0	30	0	0	0	0	0	14	18	0	0	32	66	0
8:30	4	0	2	0	6	0	29	2	0	31	0	0	0	0	0	10	16	0	0	26	63	0
8:45	2	0	1	0	3	0	44	3	0	47	0	0	0	0	0	31	20	0	0	51	101	0
Total	11	0	4	0	15	0	122	14	0	136	0	0	0	0	0	62	66	0	0	128	279	0
9:00	1	0	1	0	2	0	25	3	0	28	0	0	0	0	0	10	28	0	0	38	68	0
9:15	3	0	1	0	4	0	29	5	0	34	0	0	0	0	0	12	21	0	0	33	71	0
9:30	1	0	1	0	2	0	50	3	0	53	0	0	0	0	0	19	29	0	0	48	103	0
9:45	0	0	2	0	2	0	66	6	0	72	0	0	0	0	0	13	39	0	0	52	126	0
Total	5	0	5	0	10	0	170	17	0	187	0	0	0	0	0	54	117	0	0	171	368	0
10:00	2	0	0	0	2	0	61	5	0	66	0	0	0	0	0	9	44	0	0	53	121	0
10:15	0	0	3	0	3	0	65	7	0	72	0	0	0	0	0	19	49	0	0	68	143	0
10:30	9	0	5	0	14	0	56	6	0	62	0	0	0	0	0	15	44	0	0	59	135	0
10:45	5	0	6	0	11	0	72	3	0	75	0	0	0	0	0	27	37	0	0	64	150	0
Total	16	0	14	0	30	0	254	21	0	275	0	0	0	0	0	70	174	0	0	244	549	0
11:00	3	0	2	0	5	0	53	7	0	60	0	0	0	0	0	19	68	0	0	87	152	0
11:15	5	0	1	0	6	0	52	4	0	56	0	0	0	0	0	30	50	0	0	80	142	0
11:30	5	0	10	0	15	0	57	8	0	65	0	0	0	0	0	26	54	0	0	80	160	0
11:45	4	0	3	0	7	0	75	7	0	82	0	0	0	0	0	37	53	0	0	90	179	0
Total	17	0	16	0	33	0	237	26	0	263	0	0	0	0	0	112	225	0	0	337	633	0
12:00	4	0	1	0	5	0	58	7	0	65	0	0	0	0	0	27	78	0	0	105	175	0
12:15	3	0	1	0	4	0	69	3	0	72	0	0	0	0	0	30	65	0	0	95	171	0
12:30	8	0	1	0	9	0	63	10	0	73	0	0	0	0	0	30	52	0	0	82	164	0
12:45	4	0	2	0	6	0	75	6	0	81	0	0	0	0	0	32	56	0	0	88	175	0
Total	19	0	5	0	24	0	265	26	0	291	0	0	0	0	0	119	251	0	0	370	685	0
13:00	7	0	7	0	14	0	57	9	1	67	0	0	0	0	0	30	60	0	0	90	171	1
13:15	7	0	2	0	9	0	57	8	0	65	0	0	0	0	0	26	68	0	0	94	168	0
13:30	5	0	7	0	12	0	51	3	0	54	0	0	0	0	0	35	55	0	0	90	156	0
13:45	10	0	9	0	19	0	65	9	0	74	0	0	0	0	0	41	72	0	0	113	206	0
Total	29	0	25	0	54	0	230	29	1	260	0	0	0	0	0	132	255	0	0	387	701	1
14:00	7	0	8	0	15	0	58	11	0	69	0	0	0	0	0	36	76	0	0	112	196	0
14:15	14	0	21	0	35	0	69	9	0	78	0	0	0	0	0	26	70	0	0	96	209	0
14:30	6	0	6	0	12	0	60	6	0	66	0	0	0	0	0	23	62	0	0	85	163	0
14:45	5	0	9	0	14	0	64	7	0	71	0	0	0	0	0	27	49	0	0	76	161	0
Total	32	0	44	0	76	0	251	33	0	284	0	0	0	0	0	112	257	0	0	369	729	0
15:00	3	0	10	0	13	0	51	11	0	62	0	0	0	0	0	21	80	0	0	101	176	0
15:15	5	0	7	0	12	0	61	14	0	75	0	0	0	0	0	21	76	0	0	97	184	0
15:30	8	0	7	0	15	0	66	7	0	73	0	0	0	0	0	23	67	0	0	90	178	0
15:45	6	0	15	0	21	0	56	8	0	64	0	0	0	0	0	31	67	0	0	98	183	0
Total	22	0	39	0	61	0	234	40	0	274	0	0	0	0	0	96	290	0	0	386	721	0
16:00	8	0	15	0	23	0	61	2	0	63	0	0	0	0	0	21	69	0	0	90	176	0
16:15	7	0	10	0	17	0	61	7	0	68	0	0	0	0	0	10	73	0	0	83	168	0
16:30	6	0	7	0	13	0	42	8	0	50	0	0	0	0	0	13	83	0	0	96	159	0
16:45	7	0	11	0	18	0	72	3	0	75	0	0	0	0	0	14	46	0	0	60	153	0
Total	28	0	43	0	71	0	236	20	0	256	0	0	0	0	0	58	271	0	0	329	656	0
17:00	13	0	20	0	33	0	61	2	0	63	0	0	0	0	0	17	58	0	0	75	171	0
17:15	16	0	12	0	28	0	54	9	0	63	0	0	0	0	0	12	55	0	0	67	158	0
17:30	7	0	17	0	24	0	48	7	0	55	0	0	0	0	0	9	52	0	0	61	140	0
17:45	7	0	8	0	15	0	58	10	0	68	0	0	0	0	0	6	47	0	0	53	136	0
Total	43	0	57	0	100	0	221	28	0	249	0	0	0	0	0	44	212	0	0	256	605	0
18:00	11	0	9	0	20	0	50	4	0	54	0	0	0	0	0	12	51	0	0	63	137	0
18:15	2	0	6	0	8	0	34	0	0	34	0	0	0	0	0	10	51	0	0	61	103	0
18:30	4	0	4	0	8	0	45	3	0	48	0	0	0	0	0	7	31	0	0	38	94	0
18:45	10	0	5	0	15	0	47	4	0	51	0	0	0	0	0	11	41	0	0	52	118	0
Total	27	0	24	0	51	0	176	11	0	187	0	0	0	0	0	40	174	0	0	214	452	0
Grand Total	250	0	279	0	529	0	2465	267	1	2733	0	0	0	0	0	909	2328	0	0	3237	6499	1
Apprch %	47.3%	0.0%	52.7%	0.0%		0.0%	90.2%	9.8%	0.0%		0.0%	0.0%	0.0%	0.0%		28.1%	71.9%	0.0%	0.0%			
Total %	3.8%	0.0%	4.3%	0.0%	8.1%	0.0%	37.9%	4.1%	0.0%	42.1%	0.0%	0.0%	0.0%	0.0%	0.0%	14.0%	35.8%	0.0%	0.0%	49.8%	100.0%	

AM PEAK HOUR	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 10:45 to 11:45																					
Peak Hour For Entire Intersection Begins at 10:45																					
10:45	5	0	6	0	11	0	72	3	0	75	0	0	0	0	0	27	37	0	0	64	150
11:00	3	0	2	0	5	0	53	7	0	60	0	0	0	0	0	19	68	0	0	87	152
11:15	5	0	1	0	6	0	52	4	0	56	0	0	0	0	0	30	50	0	0	80	142
11:30	5	0	10	0	15	0	57	8	0	65	0	0	0	0	0	26	54	0	0	80	160
Total Volume	18	0	19	0	37	0	234	22	0	256	0	0	0	0	0	102	209	0	0	311	604
% App Total	48.6%	0.0%	51.4%	0.0%		0.0%	91.4%	8.6%	0.0%		0.0%	0.0%	0.0%	0.0%		32.8%	67.2%	0.0%	0.0%		
PHF	.900	.000	.475	.000	.617	.000	.813	.688	.000	.853	.000	.000	.000	.000	.000	.850	.768	.000	.000	.894	.944

NOON PEAK	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 13:45 to 14:45																					
Peak Hour For Entire Intersection Begins at 13:45																					
13:45	10	0	9	0	19	0	65	9	0	74	0	0	0	0	0	41	72	0	0	113	206
14:00	7	0	8	0	15	0	58	11	0	69	0	0	0	0	0	36	76	0	0	112	196
14:15	14	0	21	0	35	0	69	9	0	78	0	0	0	0	0	26	70	0	0	96	209
14:30	6	0	6	0	12	0	60	6	0	66	0	0	0	0	0	23	62	0	0	85	163
Total Volume	37	0	44	0	81	0	252	35	0	287	0	0	0	0	0	126	280	0	0	406	774
% App Total	45.7%	0.0%	54.3%	0.0%		0.0%	87.8%	12.2%	0.0%		0.0%	0.0%	0.0%	0.0%		31.0%	69.0%	0.0%	0.0%		
PHF	.661	.000	.524	.000	.579	.000	.913	.795	.000	.920	.000	.000	.000	.000	.000	.768	.921	.000	.000	.898	.926

PM PEAK HOUR	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	3	0	10	0	13	0	51	11	0	62	0	0	0	0	0	21	80	0	0	101	176
15:15	5	0	7	0	12	0	61	14	0	75	0	0	0	0	0	21	76	0	0	97	184
15:30	8	0	7	0	15	0	66	7	0	73	0	0	0	0	0	23	67	0	0	90	178
15:45	6	0	15	0	21	0	56	8	0	64	0	0	0	0	0	31	67	0	0	98	183
Total Volume	22	0	39	0	61	0	234	40	0	274	0	0	0	0	0	96	290	0	0	386	721
% App Total	36.1%	0.0%	63.9%	0.0%		0.0%	85.4%	14.6%	0.0%		0.0%	0.0%	0.0%	0.0%		24.9%	75.1%	0.0%	0.0%		
PHF	.688	.000	.650	.000	.726	.000	.886	.714	.000	.913	.000	.000	.000	.000	.000	.774	.906	.000	.000	.955	.980

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7203-001 Mt Diablo Scenic Blvd & Diablo Rd/Blackhawk Rd
Date : 3/12/2017

Bank 1 Count = Bikes

	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
8:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0
8:45	0	0	4	0	4	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	5	0
Total	0	0	4	0	4	0	0	2	0	2	0	0	0	0	0	1	1	0	0	2	8	0
9:00	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	0	0	1	3	0
9:15	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	3	0	0	0	3	5	0
9:30	1	2	0	0	3	0	0	2	0	2	0	0	0	0	0	3	2	0	0	5	10	0
9:45	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	2	0
Total	1	2	0	0	3	0	2	6	0	8	0	0	0	0	0	7	2	0	0	9	20	0
10:00	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	0
10:15	2	0	0	0	2	0	2	4	0	6	0	0	0	0	0	1	2	0	0	3	11	0
10:30	0	0	0	0	0	0	2	5	0	7	0	0	0	0	0	3	3	0	0	6	13	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2	0
Total	2	0	0	0	2	0	6	9	0	15	0	0	0	0	0	5	7	0	0	12	29	0
11:00	1	0	0	0	1	0	3	4	0	7	0	0	0	0	0	0	0	0	0	0	8	0
11:15	2	0	0	0	2	0	1	4	0	5	0	0	0	0	0	1	1	0	0	2	9	0
11:30	1	0	0	0	1	0	4	2	0	6	0	0	0	0	0	1	3	0	0	4	11	0
11:45	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	1	0	0	0	1	4	0
Total	4	0	0	0	4	0	10	11	0	21	0	0	0	0	0	3	4	0	0	7	32	0
12:00	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	2	0
12:15	2	0	0	0	2	0	1	3	0	4	0	0	0	0	0	3	0	0	0	3	9	0
12:30	6	0	0	0	6	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	7	0
12:45	3	0	0	0	3	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	5	0
Total	11	0	0	0	11	0	3	6	0	9	0	0	0	0	0	3	0	0	0	3	23	0
13:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
13:15	1	0	0	0	1	0	3	2	0	5	0	0	0	0	0	5	0	0	0	5	11	0
13:30	1	0	3	0	4	0	0	2	0	2	0	0	0	0	0	1	2	0	0	3	9	0
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0
Total	2	0	3	0	5	0	4	4	0	8	0	0	0	0	0	7	2	0	0	9	22	0
14:00	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	2	0	0	0	2	6	0
14:15	6	0	0	0	6	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	8	0
14:30	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	4	1	0	0	5	7	0
14:45	1	0	2	0	3	0	0	2	0	2	0	0	0	0	0	2	0	0	0	2	7	0
Total	8	0	3	0	11	0	4	4	0	8	0	0	0	0	0	8	1	0	0	9	28	0
15:00	3	0	0	0	3	0	0	2	0	2	0	0	0	0	0	3	0	0	0	3	8	0
15:15	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	0	5	0	0	5	8	0
15:30	2	0	0	0	2	0	2	3	0	5	0	0	0	0	0	4	2	0	0	6	13	0
15:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0
Total	5	0	2	0	7	0	2	7	0	9	0	0	0	0	0	7	8	0	0	15	31	0
16:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:15	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	2	0
16:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
16:45	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0
Total	1	0	0	0	1	0	3	1	0	4	0	0	0	0	0	1	0	0	0	1	6	0
17:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:15	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0
17:30	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
17:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	3	0	1	0	4	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	5	0
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
18:30	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0
Total	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	3	0
Grand Total	37	2	14	0	53	0	34	52	0	86	0	0	0	0	0	43	25	0	0	68	207	0
Apprch %	69.8%	3.8%	26.4%			0.0%	39.5%	60.5%			0.0%	0.0%	0.0%			63.2%	36.8%	0.0%				
Total %	17.9%	1.0%	6.8%		25.6%	0.0%	16.4%	25.1%		41.5%	0.0%	0.0%	0.0%		0.0%	20.8%	12.1%	0.0%		32.9%	100.0%	

AM PEAK HOUR	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 10:45 to 11:45																					
Peak Hour For Entire Intersection Begins at 10:45																					
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2
11:00	1	0	0	0	1	0	3	4	0	7	0	0	0	0	0	0	0	0	0	0	8
11:15	2	0	0	0	2	0	1	4	0	5	0	0	0	0	0	1	1	0	0	2	9
11:30	1	0	0	0	1	0	4	2	0	6	0	0	0	0	0	1	3	0	0	4	11
Total Volume	4	0	0	0	4	0	8	10	0	18	0	0	0	0	0	3	5	0	0	8	30
% App Total	100.0%	0.0%	0.0%			0.0%	44.4%	55.6%			0.0%	0.0%	0.0%			37.5%	62.5%	0.0%			
PHF	.500	.000	.000		.500	.000	.500	.625		.643	.000	.000	.000		.000	.750	.417	.000		.500	.682

NOON PEAK	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 13:45 to 14:45																					
Peak Hour For Entire Intersection Begins at 13:45																					
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
14:00	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	2	0	0	0	2	6
14:15	6	0	0	0	6	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	8
14:30	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	4	1	0	0	5	7
Total Volume	7	0	1	0	8	0	4	2	0	6	0	0	0	0	0	7	1	0	0	8	22
% App Total	87.5%	0.0%	12.5%			0.0%	66.7%	33.3%			0.0%	0.0%	0.0%			87.5%	12.5%	0.0%			
PHF	.292	.000	.250		.333	.000	.333	.500		.375	.000	.000	.000		.000	.438	.250	.000		.400	.688

PM PEAK HOUR	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 15:00 to 16:00																					
Peak Hour For Entire Intersection Begins at 15:00																					
15:00	3	0	0	0	3	0	0	2	0	2	0	0	0	0	0	3	0	0	0	3	8
15:15	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	0	5	0	0	5	8
15:30	2	0	0	0	2	0	2	3	0	5	0	0	0	0	0	4	2	0	0	6	13
15:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
Total Volume	5	0	2	0	7	0	2	7	0	9	0	0	0	0	0	7	8	0	0	15	31
% App Total	71.4%	0.0%	28.6%			0.0%	22.2%	77.8%			0.0%	0.0%	0.0%			46.7%	53.3%	0.0%			
PHF	.417	.000	.500		.583	.000	.250	.583		.450	.000	.000	.000		.000	.438	.400	.000		.625	.596

Mt Diablo Scenic Blvd & Diablo Rd/Blackhawk Rd

Date: 3/12/2017

Day: Sunday

Project #: 17-7203-001

AM Peak Hour	10:45 - 11:45
NOON Peak Hour	13:45 - 14:45
PM Peak Hour	15:00 - 16:00

Peak Hour Summary

Southbound Approach (Mt Diablo Scenic Blvd)

AM	19	0	18	0	124
NOON	44	0	37	0	161
PM	39	0	22	0	136

Eastbound Approach (Diablo Rd/Blackhawk Rd)

	AM	NOON	PM
	253	296	273
	0	0	0
	102	126	96
	209	280	290
	0	0	0

Westbound Approach

	AM	NOON	PM
	22	35	40
	234	252	234
	0	0	0
	0	0	0
	227	317	312

CONTROL

Northbound Approach

AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	0	0	0	0	0

Count Periods	Start	End
AM	7:00 AM	11:00 AM
NOON	11:00 AM	3:00 PM
PM	3:00 PM	7:00 PM

Total Ins & Outs

	North Leg		
	37	124	AM
	81	161	NOON
	61	136	PM

West Leg AM	NOON	PM		East Leg AM	NOON	PM
253	296	273		256	287	274
311	406	386		227	317	312

	South Leg	
AM	0	0
NOON	0	0
PM	0	0

Total Volume Per Leg

	North Leg	
	161	AM
	242	NOON
	197	PM

West Leg AM	NOON	PM	East Leg AM	NOON	PM
564	702	659	483	604	586

	South Leg
AM	0
NOON	0
PM	0

Mt Diablo Scenic Blvd & Diablo Rd/Blackhawk Rd

Date: 3/12/2017

Day: Sunday

Project #: 17-7203-001

AM Peak Hour	10:45 - 11:45
NOON Peak Hour	13:45 - 14:45
PM Peak Hour	15:00 - 16:00

Peak Hour Summary

Southbound Approach (Mt Diablo Scenic Blvd)

AM	0	0	4	0	13
NOON	1	0	7	0	9
PM	2	0	5	0	14

Eastbound Approach (Diablo Rd/Blackhawk Rd)

	AM	NOON	PM
	8	5	4
	0	0	0
	3	7	7
	5	1	8
	0	0	0

Westbound Approach

	AM	NOON	PM
	10	2	7
	8	4	2
	0	0	0
	0	0	0
	9	8	13

CONTROL

Northbound Approach

AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	0	0	0	0	0

Count Periods	Start	End
AM	7:00 AM	11:00 AM
NOON	11:00 AM	3:00 PM
PM	3:00 PM	7:00 PM

Total Ins & Outs

	North Leg		
	4	13	AM
	8	9	NOON
	7	14	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
8	5	4		18	6	9
8	8	15		9	8	13

	South Leg	
AM	0	0
NOON	0	0
PM	0	0

Total Volume Per Leg

	North Leg
AM	17
NOON	17
PM	21

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
16	13	19		27	14	22

	South Leg
AM	0
NOON	0
PM	0

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7203-101 Mt Diablo Scenic Blvd & Diablo Rd/Blackhawk Rd
Date : 3/12/2017

Unshifted Count = All Vehicles & Uturns

	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
7:30	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
8:00	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
8:15	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
8:30	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
8:45	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0
Total	0	15	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0
9:00	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
9:45	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
Total	0	10	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0
10:00	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
10:15	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
10:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
10:45	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
Total	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0
11:00	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
11:15	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0
11:30	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
11:45	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
Total	0	31	0	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0
12:00	0	10	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0
12:15	0	18	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0
12:30	0	21	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0
12:45	0	14	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0
Total	0	63	0	0	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63	0
13:00	0	15	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0
13:15	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0
13:30	0	18	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0
13:45	0	38	0	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	0
Total	0	82	0	0	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	82	0
14:00	0	36	0	0	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	0
14:15	0	32	0	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	0
14:30	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0
14:45	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0
Total	0	92	0	0	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	92	0
15:00	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0
15:15	0	19	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0
15:30	0	16	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0
15:45	0	20	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
Total	0	67	0	0	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67	0
16:00	0	23	0	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0
16:15	0	10	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0
16:30	0	26	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0
16:45	0	20	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
Total	0	79	0	0	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79	0
17:00	0	29	0	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	0
17:15	0	31	0	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0
17:30	0	26	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0
17:45	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0
Total	0	97	0	0	97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	97	0
18:00	0	14	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0
18:15	0	14	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0
18:30	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
18:45	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0
Total	0	43	0	0	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	0
Grand Total	0	597	0	0	597	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	597	0
Apprch %	0.0%	100.0%	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%			
Total %	0.0%	100.0%	0.0%	0.0%	100.0%	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%	100.0%	

AM PEAK HOUR	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 10:45 to 11:45																					
Peak Hour For Entire Intersection Begins at 10:45																					
10:45	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
11:00	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
11:15	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
11:30	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Total Volume	0	28	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
% App Total	0.0%	100.0%	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%		
PHF	.000	.778	.000	.000	.778	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.778

NOON PEAK	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 13:30 to 14:30																					
Peak Hour For Entire Intersection Begins at 13:30																					
13:30	0	18	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
13:45	0	38	0	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
14:00	0	36	0	0	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
14:15	0	32	0	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
Total Volume	0	124	0	0	124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	124
% App Total	0.0%	100.0%	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%		
PHF	.000	.816	.000	.000	.816	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.816

PM PEAK HOUR	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	26	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
16:45	0	20	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
17:00	0	29	0	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
17:15	0	31	0	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
Total Volume	0	106	0	0	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106
% App Total	0.0%	100.0%	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%		
PHF	.000	.855	.000	.000	.855	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.855

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Bikes On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7203-101 Mt Diablo Scenic Blvd & Diablo Rd/Blackhawk Rd
Date : 3/12/2017

Bank 1 Count = Bikes

	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
9:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
11:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
11:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Total	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
12:30	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3	0
12:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	5	0
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
14:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
14:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
14:30	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
14:45	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Total	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
15:00	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
15:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Total	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
16:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:30	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
16:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
Grand Total	0	0	37	0	37	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	38	0
Apprch %	0.0%	0.0%	100.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			100.0%	0.0%	0.0%				
Total %	0.0%	0.0%	97.4%		97.4%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	2.6%	0.0%	0.0%		2.6%	100.0%	

AM PEAK HOUR	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 10:45 to 11:45																					
Peak Hour For Entire Intersection Begins at 10:45																					
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
% App Total	0.0%	0.0%	100.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.500		.500	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.500

NOON PEAK	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 13:30 to 14:30																					
Peak Hour For Entire Intersection Begins at 13:30																					
13:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
14:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
% App Total	0.0%	0.0%	100.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.750		.750	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.750

PM PEAK HOUR	Mt Diablo Scenic Blvd Southbound					Diablo Rd/Blackhawk Rd Westbound					Mt Diablo Scenic Blvd Northbound					Diablo Rd/Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
16:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total Volume	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
% App Total	0.0%	0.0%	100.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.563		.563	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.563

Mt Diablo Scenic Blvd & Diablo Rd/Blackhawk Rd

Date: 3/12/2017

Day: Sunday

Project #: 17-7203-101

AM Peak Hour	10:45 - 11:45
NOON Peak Hour	13:30 - 14:30
PM Peak Hour	16:30 - 17:30

Peak Hour Summary

Southbound Approach (Mt Diablo Scenic Blvd)

AM	0	28	0	0	0
NOON	0	124	0	0	0
PM	0	106	0	0	0

Eastbound Approach (Diablo Rd/Blackhawk Rd)

	AM	NOON	PM
	0	0	0
	0	0	0
	0	0	0
	0	0	0
	0	0	0

Westbound Approach

	AM	NOON	PM
	0	0	0
	0	0	0
	0	0	0
	0	0	0
	0	0	0

CONTROL

Northbound Approach

AM	28	0	0	0	0
NOON	124	0	0	0	0
PM	106	0	0	0	0

Count Periods	Start	End
AM	7:00 AM	11:00 AM
NOON	11:00 AM	3:00 PM
PM	3:00 PM	7:00 PM

Total Ins & Outs

	North Leg	East Leg	South Leg	West Leg
AM	28	0	28	0
NOON	124	0	124	0
PM	106	0	106	0

Total Volume Per Leg

	North Leg	East Leg	South Leg	West Leg
AM	28	0	28	0
NOON	124	0	124	0
PM	106	0	106	0

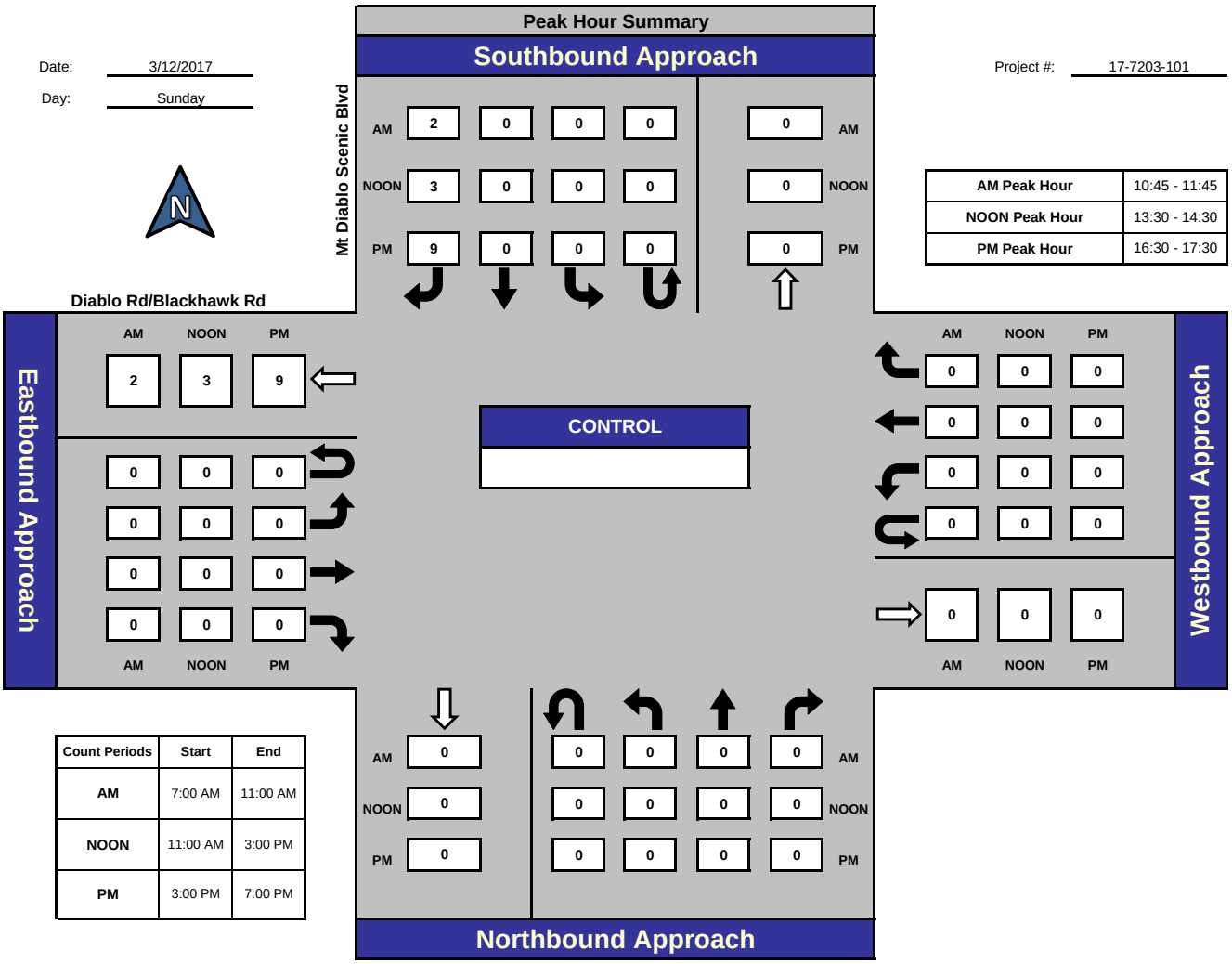
Mt Diablo Scenic Blvd & Diablo Rd/Blackhawk Rd

Date: 3/12/2017

Day: Sunday

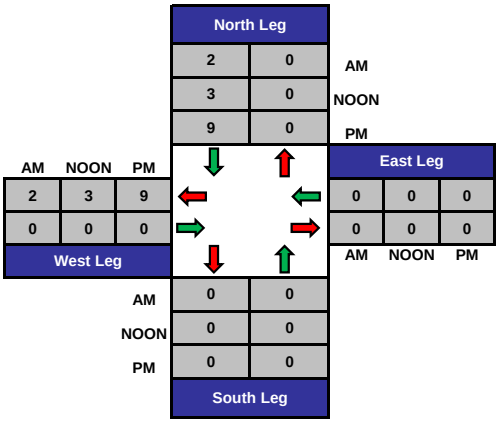
Project #: 17-7203-101

Peak Hour Summary	
AM Peak Hour	10:45 - 11:45
NOON Peak Hour	13:30 - 14:30
PM Peak Hour	16:30 - 17:30

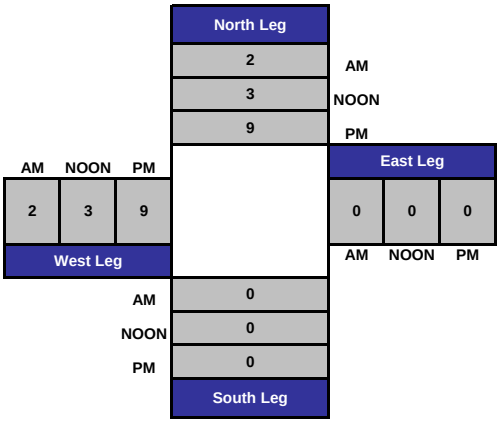


Count Periods	Start	End
AM	7:00 AM	11:00 AM
NOON	11:00 AM	3:00 PM
PM	3:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Peds & Bikes On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7438-005 Hidden Oak Dr/Magee Ranch Rd & Blackhawk Rd
Date : 5/13/2017

Unshifted Count = All Vehicles & Uturns

	Hidden Oak Dr/Magee Ranch Rd Southbound					Blackhawk Rd Westbound					Hidden Oak Dr/Magee Ranch Rd Northbound					Blackhawk Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
9:45	14	0	8	0	22	3	40	4	0	47	18	0	23	0	41	10	51	4	0	65	175	0
10:00	6	0	6	1	13	7	40	5	1	53	5	0	6	0	11	8	48	4	0	60	137	2
10:15	10	1	14	0	25	11	41	6	0	58	12	0	8	0	20	3	25	4	0	32	135	0
10:30	5	0	3	0	8	8	52	5	0	65	5	0	8	0	13	8	35	6	0	49	135	0
Total	35	1	31	1	68	29	173	20	1	223	40	0	45	0	85	29	159	18	0	206	582	2
10:45	9	0	8	0	17	3	50	9	0	62	8	0	13	0	21	9	53	10	0	72	172	0
11:00	9	0	5	0	14	6	57	8	0	71	11	0	9	0	20	3	53	7	0	63	168	0
11:15	12	0	12	0	24	8	42	11	0	61	10	0	9	0	19	11	42	4	0	57	161	0
11:30	10	0	5	0	15	7	51	12	0	70	9	1	1	0	11	4	42	9	0	55	151	0
Total	40	0	30	0	70	24	200	40	0	264	38	1	32	0	71	27	190	30	0	247	652	0
Grand Total	75	1	61	1	138	53	373	60	1	487	78	1	77	0	156	56	349	48	0	453	1234	2
Apprch %	54.3%	0.7%	44.2%	0.7%		10.9%	76.6%	12.3%	0.2%		50.0%	0.6%	49.4%	0.0%		12.4%	77.0%	10.6%	0.0%			
Total %	6.1%	0.1%	4.9%	0.1%	11.2%	4.3%	30.2%	4.9%	0.1%	39.5%	6.3%	0.1%	6.2%	0.0%	12.6%	4.5%	28.3%	3.9%	0.0%	36.7%	100.0%	

AM PEAK HOUR	Hidden Oak Dr/Magee Ranch Rd Southbound					Blackhawk Rd Westbound					Hidden Oak Dr/Magee Ranch Rd Northbound					Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 10:45 to 11:45																					
Peak Hour For Entire Intersection Begins at 10:45																					
10:45	9	0	8	0	17	3	50	9	0	62	8	0	13	0	21	9	53	10	0	72	172
11:00	9	0	5	0	14	6	57	8	0	71	11	0	9	0	20	3	53	7	0	63	168
11:15	12	0	12	0	24	8	42	11	0	61	10	0	9	0	19	11	42	4	0	57	161
11:30	10	0	5	0	15	7	51	12	0	70	9	1	1	0	11	4	42	9	0	55	151
Total Volume	40	0	30	0	70	24	200	40	0	264	38	1	32	0	71	27	190	30	0	247	652
% App Total	57.1%	0.0%	42.9%	0.0%		9.1%	75.8%	15.2%	0.0%		53.5%	1.4%	45.1%	0.0%		10.9%	76.9%	12.1%	0.0%		
PHF	.833	.000	.625	.000	.729	.750	.877	.833	.000	.930	.864	.250	.615	.000	.845	.614	.896	.750	.000	.858	.948

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Peds & Bikes On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7438-005 Hidden Oak Dr/Magee Ranch Rd & Blackhawk Rd
Date : 5/13/2017

Bank 1 Count = Peds & Bikes

	Hidden Oak Dr/Magee Ranch Rd Southbound					Blackhawk Rd Westbound					Hidden Oak Dr/Magee Ranch Rd Northbound					Blackhawk Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
9:45	0	0	0	0	0	0	95	0	0	95	0	0	0	0	0	0	1	0	0	1	96	0
10:00	0	0	0	0	0	0	9	0	2	9	0	0	0	0	0	0	1	0	0	1	10	2
10:15	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	6	0	0	6	13	0
10:30	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	19	0	0	19	23	0
Total	0	0	0	0	0	0	115	0	2	115	0	0	0	0	0	0	27	0	0	27	142	2
10:45	0	0	0	0	0	0	5	0	1	5	0	1	0	2	1	0	3	0	2	3	9	5
11:00	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	6	0
11:15	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	9	0
11:30	0	1	0	0	1	0	12	0	2	12	0	0	0	0	0	0	4	0	0	4	17	2
Total	0	1	0	0	1	0	25	0	3	25	0	1	0	2	1	0	14	0	2	14	41	7
Grand Total	0	1	0	0	1	0	140	0	5	140	0	1	0	2	1	0	41	0	2	41	183	9
Apprch %	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%				
Total %	0.0%	0.5%	0.0%		0.5%	0.0%	76.5%	0.0%		76.5%	0.0%	0.5%	0.0%		0.5%	0.0%	22.4%	0.0%		22.4%	100.0%	

AM PEAK HOUR	Hidden Oak Dr/Magee Ranch Rd Southbound					Blackhawk Rd Westbound					Hidden Oak Dr/Magee Ranch Rd Northbound					Blackhawk Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 10:45 to 11:45																					
Peak Hour For Entire Intersection Begins at 10:45																					
10:45	0	0	0	0	0	0	5	0	1	5	0	1	0	2	1	0	3	0	2	3	9
11:00	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	6
11:15	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	9
11:30	0	1	0	0	1	0	12	0	2	12	0	0	0	0	0	0	4	0	0	4	17
Total Volume	0	1	0	0	1	0	25	0	3	25	0	1	0	2	1	0	14	0	2	14	41
% App Total	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.250	.000		.250	.000	.521	.000		.521	.000	.250	.000		.250	.000	.875	.000		.875	.603

Hidden Oak Dr/Magee Ranch Rd & Blackhawk Rd

Date: 5/13/2017

Day: Saturday

Project #: 17-7438-005

AM Peak Hour	10:45 - 11:45
NOON Peak Hour	
PM Peak Hour	

Peak Hour Summary

Southbound Approach (Hidden Oak Dr/Magee R)

AM	30	0	40	0	68
NOON	0	0	0	0	0
PM	0	0	0	0	0

Eastbound Approach (Blackhawk Rd)

	AM	NOON	PM
	268	0	0
	0	0	0
	27	0	0
	190	0	0
	30	0	0

Westbound Approach

	AM	NOON	PM
	40	0	0
	200	0	0
	24	0	0
	0	0	0
	262	0	0

Northbound Approach

AM	54	0	38	1	32
NOON	0	0	0	0	0
PM	0	0	0	0	0

CONTROL

Count Periods	Start	End
AM	9:45 AM	11:45 AM
NOON	NONE	NONE
PM	NONE	NONE

Total Ins & Outs

	North Leg		
	70	68	AM
	0	0	NOON
	0	0	PM

West Leg	AM	NOON	PM
	268	0	0
	247	0	0

East Leg	AM	NOON	PM
	264	0	0
	262	0	0

South Leg	
AM	54
NOON	0
PM	0
	71
	0
	0

Total Volume Per Leg

North Leg	
138	AM
0	NOON
0	PM

West Leg	AM	NOON	PM
	515	0	0

East Leg	AM	NOON	PM
	526	0	0

South Leg	
AM	125
NOON	0
PM	0

Hidden Oak Dr/Magee Ranch Rd & Blackhawk Rd

Date: 5/13/2017

Day: Saturday

Project #: 17-7438-005

Peak Hour Summary

AM Peak Hour	10:45 - 11:45
NOON Peak Hour	
PM Peak Hour	

Southbound Approach

Hidden Oak Dr/Magee F

AM	0	1	0	0	1
NOON	0	0	0	0	0
PM	0	0	0	0	0

Eastbound Approach

Blackhawk Rd

	AM	NOON	PM
	25	0	0
	0	0	0
	0	0	0
	14	0	0
	0	0	0
	AM	NOON	PM

Westbound Approach

	AM	NOON	PM
	0	0	0
	25	0	0
	0	0	0
	0	0	0
	14	0	0
	AM	NOON	PM

CONTROL

Northbound Approach

AM	1	0	0	1	0
NOON	0	0	0	0	0
PM	0	0	0	0	0

Count Periods	Start	End
AM	9:45 AM	11:45 AM
NOON	NONE	NONE
PM	NONE	NONE

Total Ins & Outs

	North Leg		
	1	1	AM
	0	0	NOON
	0	0	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
25	0	0		25	0	0
14	0	0		14	0	0

	South Leg	
AM	1	1
NOON	0	0
PM	0	0

Total Volume Per Leg

	North Leg	
	2	AM
	0	NOON
	0	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
39	0	0		39	0	0

	South Leg
AM	2
NOON	0
PM	0

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Peds & Bikes On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7438-002 Calle Arroyo & Diablo Rd
Date : 5/13/2017

Unshifted Count = All Vehicles & Uturns

	Calle Arroyo Southbound					Diablo Rd Westbound					Calle Arroyo Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
9:45	0	0	1	0	1	0	94	0	0	94	0	0	0	0	0	1	90	0	0	91	186	0
10:00	0	0	0	0	0	0	76	0	0	76	0	0	0	0	0	3	77	0	0	80	156	0
10:15	0	0	4	0	4	0	103	0	0	103	0	0	0	0	0	1	70	0	0	71	178	0
10:30	1	0	2	0	3	0	106	1	0	107	0	0	0	0	0	5	74	0	0	79	189	0
Total	1	0	7	0	8	0	379	1	0	380	0	0	0	0	0	10	311	0	0	321	709	0
10:45	0	0	4	0	4	0	92	0	0	92	0	0	0	0	0	4	102	0	0	106	202	0
11:00	0	0	4	0	4	0	95	0	0	95	0	0	0	0	0	2	94	0	0	96	195	0
11:15	0	0	2	0	2	0	95	0	0	95	0	0	0	0	0	3	88	0	0	91	188	0
11:30	0	0	5	0	5	0	104	0	0	104	0	0	0	0	0	3	83	0	0	86	195	0
Total	0	0	15	0	15	0	386	0	0	386	0	0	0	0	0	12	367	0	0	379	780	0
Grand Total	1	0	22	0	23	0	765	1	0	766	0	0	0	0	0	22	678	0	0	700	1489	0
Apprch %	4.3%	0.0%	95.7%	0.0%		0.0%	99.9%	0.1%	0.0%		0.0%	0.0%	0.0%	0.0%		3.1%	96.9%	0.0%	0.0%			
Total %	0.1%	0.0%	1.5%	0.0%	1.5%	0.0%	51.4%	0.1%	0.0%	51.4%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	45.5%	0.0%	0.0%	47.0%	100.0%	

AM PEAK HOUR	Calle Arroyo Southbound					Diablo Rd Westbound					Calle Arroyo Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 10:45 to 11:45																					
Peak Hour For Entire Intersection Begins at 10:45																					
10:45	0	0	4	0	4	0	92	0	0	92	0	0	0	0	0	4	102	0	0	106	202
11:00	0	0	4	0	4	0	95	0	0	95	0	0	0	0	0	2	94	0	0	96	195
11:15	0	0	2	0	2	0	95	0	0	95	0	0	0	0	0	3	88	0	0	91	188
11:30	0	0	5	0	5	0	104	0	0	104	0	0	0	0	0	3	83	0	0	86	195
Total Volume	0	0	15	0	15	0	386	0	0	386	0	0	0	0	0	12	367	0	0	379	780
% App Total	0.0%	0.0%	100.0%	0.0%		0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		3.2%	96.8%	0.0%	0.0%		
PHF	.000	.000	.750	.000	.750	.000	.928	.000	.000	.928	.000	.000	.000	.000	.000	.750	.900	.000	.000	.894	.965

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Peds & Bikes On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7438-002 Calle Arroyo & Diablo Rd
Date : 5/13/2017

Bank 1 Count = Peds & Bikes

	Calle Arroyo Southbound					Diablo Rd Westbound					Calle Arroyo Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
9:45	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	10	4	0	0	14	17	0
10:00	0	0	0	3	0	0	18	0	0	18	0	0	0	0	0	3	12	0	0	15	33	3
10:15	0	0	0	3	0	0	8	0	0	8	0	0	0	0	0	2	11	0	0	13	21	3
10:30	0	0	2	3	2	0	6	0	0	6	0	0	0	0	0	3	9	0	0	12	20	3
Total	0	0	2	9	2	0	35	0	0	35	0	0	0	0	0	18	36	0	0	54	91	9
10:45	0	0	1	0	1	0	7	0	0	7	0	0	0	0	0	2	1	0	0	3	11	0
11:00	0	0	0	3	0	0	9	0	0	9	0	0	0	0	0	0	3	0	0	3	12	3
11:15	0	0	4	3	4	0	8	0	0	8	0	0	0	0	0	2	20	0	0	22	34	3
11:30	0	0	3	0	3	0	6	0	0	6	0	0	0	0	0	2	5	0	0	7	16	0
Total	0	0	8	6	8	0	30	0	0	30	0	0	0	0	0	6	29	0	0	35	73	6
Grand Total	0	0	10	15	10	0	65	0	0	65	0	0	0	0	0	24	65	0	0	89	164	15
Apprch %	0.0%	0.0%	100.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			27.0%	73.0%	0.0%				
Total %	0.0%	0.0%	6.1%		6.1%	0.0%	39.6%	0.0%		39.6%	0.0%	0.0%	0.0%		0.0%	14.6%	39.6%	0.0%		54.3%	100.0%	

AM PEAK HOUR	Calle Arroyo Southbound					Diablo Rd Westbound					Calle Arroyo Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 10:45 to 11:45																					
Peak Hour For Entire Intersection Begins at 10:45																					
10:45	0	0	1	0	1	0	7	0	0	7	0	0	0	0	0	2	1	0	0	3	11
11:00	0	0	0	3	0	0	9	0	0	9	0	0	0	0	0	0	3	0	0	3	12
11:15	0	0	4	3	4	0	8	0	0	8	0	0	0	0	0	2	20	0	0	22	34
11:30	0	0	3	0	3	0	6	0	0	6	0	0	0	0	0	2	5	0	0	7	16
Total Volume	0	0	8	6	8	0	30	0	0	30	0	0	0	0	0	6	29	0	0	35	73
% App Total	0.0%	0.0%	100.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			17.1%	82.9%	0.0%			
PHF	.000	.000	.500		.500	.000	.833	.000		.833	.000	.000	.000		.000	.750	.363	.000		.398	.537

Calle Arroyo & Diablo Rd

Date: 5/13/2017

Day: Saturday

Project #: 17-7438-002

AM Peak Hour	10:45 - 11:45
NOON Peak Hour	
PM Peak Hour	

Peak Hour Summary

Southbound Approach (Calle Arroyo)

AM	15	0	0	0	12	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

Eastbound Approach (Diablo Rd)

	AM	NOON	PM
	401	0	0
	0	0	0
	12	0	0
	367	0	0
	0	0	0
	AM	NOON	PM

Westbound Approach

	AM	NOON	PM
	0	0	0
	386	0	0
	0	0	0
	0	0	0
	367	0	0
	AM	NOON	PM

CONTROL

Northbound Approach

AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	0	0	0	0	PM

Count Periods	Start	End
AM	9:45 AM	11:45 AM
NOON	NONE	NONE
PM	NONE	NONE

Total Ins & Outs

	North Leg		
	15	12	AM
	0	0	NOON
	0	0	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
401	0	0		386	0	0
379	0	0		367	0	0

	South Leg	
AM	0	0
NOON	0	0
PM	0	0

Total Volume Per Leg

	North Leg	
	27	AM
	0	NOON
	0	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
780	0	0		753	0	0

	South Leg
AM	0
NOON	0
PM	0

Calle Arroyo & Diablo Rd

Date: 5/13/2017

Day: Saturday

Project #: 17-7438-002

Peak Hour Summary

AM Peak Hour	10:45 - 11:45
NOON Peak Hour	
PM Peak Hour	

Southbound Approach

Calle Arroyo

AM	8	0	0	0	6	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

Eastbound Approach

Diablo Rd

AM	NOON	PM
38	0	0
0	0	0
6	0	0
29	0	0
0	0	0
AM	NOON	PM

Westbound Approach

AM	NOON	PM
0	0	0
30	0	0
0	0	0
0	0	0
29	0	0
AM	NOON	PM

CONTROL

Northbound Approach

AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	0	0	0	0	PM

Count Periods	Start	End
AM	9:45 AM	11:45 AM
NOON	NONE	NONE
PM	NONE	NONE

Total Ins & Outs

	North Leg		
	8	6	AM
	0	0	NOON
	0	0	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
38	0	0		30	0	0
35	0	0		29	0	0

	South Leg	
AM	0	0
NOON	0	0
PM	0	0

Total Volume Per Leg

	North Leg
AM	14
NOON	0
PM	0

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
73	0	0		59	0	0

	South Leg
AM	0
NOON	0
PM	0

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Peds & Bikes On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7438-003 Alameda Diablo & Diablo Rd
Date : 5/13/2017

Unshifted Count = All Vehicles & Uturns

	Alameda Diablo Southbound					Diablo Rd Westbound					Alameda Diablo Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
9:45	0	0	16	0	16	0	80	1	0	81	0	0	0	0	0	7	83	0	0	90	187	0
10:00	0	0	13	0	13	0	59	1	0	60	0	0	0	0	0	23	53	0	0	76	149	0
10:15	1	0	17	0	18	0	85	1	0	86	0	0	0	0	0	16	54	0	0	70	174	0
10:30	0	0	17	0	17	0	89	0	0	89	0	0	0	0	0	13	65	0	0	78	184	0
Total	1	0	63	0	64	0	313	3	0	316	0	0	0	0	0	59	255	0	0	314	694	0
10:45	0	0	18	0	18	0	77	1	0	78	0	0	0	0	0	12	85	0	0	97	193	0
11:00	1	0	14	0	15	0	78	0	0	78	0	0	0	0	0	14	83	0	0	97	190	0
11:15	0	0	11	0	11	0	86	3	2	91	0	0	0	0	0	11	77	0	0	88	190	2
11:30	0	0	19	0	19	0	79	0	0	79	0	0	0	0	0	16	64	0	1	81	179	1
Total	1	0	62	0	63	0	320	4	2	326	0	0	0	0	0	53	309	0	1	363	752	3
Grand Total	2	0	125	0	127	0	633	7	2	642	0	0	0	0	0	112	564	0	1	677	1446	3
Apprch %	1.6%	0.0%	98.4%	0.0%		0.0%	98.6%	1.1%	0.3%		0.0%	0.0%	0.0%	0.0%		16.5%	83.3%	0.0%	0.1%			
Total %	0.1%	0.0%	8.6%	0.0%	8.8%	0.0%	43.8%	0.5%	0.1%	44.4%	0.0%	0.0%	0.0%	0.0%	0.0%	7.7%	39.0%	0.0%	0.1%	46.8%	100.0%	

AM PEAK HOUR	Alameda Diablo Southbound					Diablo Rd Westbound					Alameda Diablo Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 10:30 to 11:30																					
Peak Hour For Entire Intersection Begins at 10:30																					
10:30	0	0	17	0	17	0	89	0	0	89	0	0	0	0	0	13	65	0	0	78	184
10:45	0	0	18	0	18	0	77	1	0	78	0	0	0	0	0	12	85	0	0	97	193
11:00	1	0	14	0	15	0	78	0	0	78	0	0	0	0	0	14	83	0	0	97	190
11:15	0	0	11	0	11	0	86	3	2	91	0	0	0	0	0	11	77	0	0	88	190
Total Volume	1	0	60	0	61	0	330	4	2	336	0	0	0	0	0	50	310	0	0	360	757
% App Total	1.6%	0.0%	98.4%	0.0%		0.0%	98.2%	1.2%	0.6%		0.0%	0.0%	0.0%	0.0%		13.9%	86.1%	0.0%	0.0%		
PHF	.250	.000	.833	.000	.847	.000	.927	.333	.250	.923	.000	.000	.000	.000	.000	.893	.912	.000	.000	.928	.981

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Peds & Bikes On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7438-003 Alameda Diablo & Diablo Rd
Date : 5/13/2017

Bank 1 Count = Peds & Bikes

	Alameda Diablo Southbound					Diablo Rd Westbound					Alameda Diablo Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
9:45	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	4	0	0	0	4	7	0
10:00	0	0	17	0	17	0	1	0	0	1	0	0	0	0	0	8	4	0	0	12	30	0
10:15	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	6	3	0	0	9	19	0
10:30	0	0	5	0	5	0	1	0	0	1	0	0	0	0	0	9	0	0	0	9	15	0
Total	0	0	34	0	34	0	3	0	0	3	0	0	0	0	0	27	7	0	0	34	71	0
10:45	0	0	6	0	6	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	8	0
11:00	0	0	10	0	10	0	1	0	0	1	0	0	0	0	0	2	1	0	0	3	14	0
11:15	0	0	4	0	4	0	2	0	0	2	0	0	0	0	0	1	19	0	0	20	26	0
11:30	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	5	0	0	0	5	11	0
Total	0	0	21	0	21	0	9	0	0	9	0	0	0	0	0	8	21	0	0	29	59	0
Grand Total	0	0	55	0	55	0	12	0	0	12	0	0	0	0	0	35	28	0	0	63	130	0
Apprch %	0.0%	0.0%	100.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			55.6%	44.4%	0.0%				
Total %	0.0%	0.0%	42.3%		42.3%	0.0%	9.2%	0.0%		9.2%	0.0%	0.0%	0.0%		0.0%	26.9%	21.5%	0.0%		48.5%	100.0%	

AM PEAK HOUR	Alameda Diablo Southbound					Diablo Rd Westbound					Alameda Diablo Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 10:30 to 11:30																					
Peak Hour For Entire Intersection Begins at 10:30																					
10:30	0	0	5	0	5	0	1	0	0	1	0	0	0	0	0	9	0	0	0	9	15
10:45	0	0	6	0	6	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	8
11:00	0	0	10	0	10	0	1	0	0	1	0	0	0	0	0	2	1	0	0	3	14
11:15	0	0	4	0	4	0	2	0	0	2	0	0	0	0	0	1	19	0	0	20	26
Total Volume	0	0	25	0	25	0	5	0	0	5	0	0	0	0	0	12	21	0	0	33	63
% App Total	0.0%	0.0%	100.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			36.4%	63.6%	0.0%			
PHF	.000	.000	.625		.625	.000	.625	.000		.625	.000	.000	.000		.000	.333	.276	.000		.413	.606

Alameda Diablo & Diablo Rd

Date: 5/13/2017

Day: Saturday

Project #: 17-7438-003

AM Peak Hour	10:30 - 11:30
NOON Peak Hour	
PM Peak Hour	

Peak Hour Summary

Southbound Approach (Alameda Diablo)

AM	60	0	1	0	54
NOON	0	0	0	0	0
PM	0	0	0	0	0

Eastbound Approach (Diablo Rd)

	AM	NOON	PM
	390	0	0
	0	0	0
	50	0	0
	310	0	0
	0	0	0

Westbound Approach

	AM	NOON	PM
	4	0	0
	330	0	0
	0	0	0
	2	0	0
	313	0	0

CONTROL

Northbound Approach

AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	0	0	0	0	0

Count Periods	Start	End
AM	9:45 AM	11:45 AM
NOON	NONE	NONE
PM	NONE	NONE

Total Ins & Outs

	AM	NOON	PM
North Leg	61	0	0
	54	0	0
East Leg	336	0	0
	313	0	0
South Leg	0	0	0
	0	0	0
West Leg	390	0	0
	360	0	0

Total Volume Per Leg

	AM	NOON	PM
North Leg	115	0	0
East Leg	649	0	0
South Leg	0	0	0
West Leg	750	0	0

Alameda Diablo & Diablo Rd

Date: 5/13/2017

Day: Saturday

Project #: 17-7438-003

Peak Hour Summary	
AM Peak Hour	10:30 - 11:30
NOON Peak Hour	
PM Peak Hour	

Southbound Approach

Alameda Diablo

AM	25	0	0	0	12	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

Eastbound Approach

Diablo Rd

AM	NOON	PM
30	0	0
0	0	0
12	0	0
21	0	0
0	0	0
AM	NOON	PM

Westbound Approach

AM	NOON	PM
0	0	0
5	0	0
0	0	0
0	0	0
21	0	0
AM	NOON	PM

CONTROL

Northbound Approach

AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	0	0	0	0	PM

Count Periods	Start	End
AM	9:45 AM	11:45 AM
NOON	NONE	NONE
PM	NONE	NONE

Total Ins & Outs

	North Leg		
	25	12	AM
	0	0	NOON
	0	0	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
30	0	0		5	0	0
33	0	0		21	0	0

	South Leg	
AM	0	0
NOON	0	0
PM	0	0

Total Volume Per Leg

	North Leg	
	37	AM
	0	NOON
	0	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
63	0	0		26	0	0

	South Leg
AM	0
NOON	0
PM	0

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Peds & Bikes On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7438-004 Avenida Nueva & Diablo Rd
Date : 5/13/2017

Unshifted Count = All Vehicles & Uturns

	Avenida Nueva Southbound					Diablo Rd Westbound					Avenida Nueva Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
9:45	6	0	3	0	9	0	75	5	0	80	0	0	0	0	0	6	75	0	0	81	170	0
10:00	8	0	10	0	18	0	51	3	0	54	0	0	1	0	1	2	59	0	0	61	134	0
10:15	6	0	11	0	17	0	78	6	0	84	0	0	1	0	1	5	48	0	0	53	155	0
10:30	6	0	13	0	19	0	75	6	0	81	0	0	0	0	0	4	61	0	0	65	165	0
Total	26	0	37	0	63	0	279	20	0	299	0	0	2	0	2	17	243	0	0	260	624	0
10:45	12	0	13	0	25	0	60	11	0	71	0	0	0	0	0	7	85	0	0	92	188	0
11:00	8	0	8	0	16	1	77	10	0	88	0	0	0	0	0	5	71	0	0	76	180	0
11:15	11	0	9	0	20	0	76	4	0	80	0	0	0	0	0	6	73	0	2	81	181	2
11:30	5	1	8	0	14	0	73	6	0	79	0	0	0	0	0	5	66	0	0	71	164	0
Total	36	1	38	0	75	1	286	31	0	318	0	0	0	0	0	23	295	0	2	320	713	2
Grand Total	62	1	75	0	138	1	565	51	0	617	0	0	2	0	2	40	538	0	2	580	1337	2
Apprch %	44.9%	0.7%	54.3%	0.0%		0.2%	91.6%	8.3%	0.0%		0.0%	0.0%	100.0%	0.0%		6.9%	92.8%	0.0%	0.3%			
Total %	4.6%	0.1%	5.6%	0.0%	10.3%	0.1%	42.3%	3.8%	0.0%	46.1%	0.0%	0.0%	0.1%	0.0%	0.1%	3.0%	40.2%	0.0%	0.1%	43.4%	100.0%	

AM PEAK HOUR	Avenida Nueva Southbound					Diablo Rd Westbound					Avenida Nueva Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 10:30 to 11:30																					
Peak Hour For Entire Intersection Begins at 10:30																					
10:30	6	0	13	0	19	0	75	6	0	81	0	0	0	0	0	4	61	0	0	65	165
10:45	12	0	13	0	25	0	60	11	0	71	0	0	0	0	0	7	85	0	0	92	188
11:00	8	0	8	0	16	1	77	10	0	88	0	0	0	0	0	5	71	0	0	76	180
11:15	11	0	9	0	20	0	76	4	0	80	0	0	0	0	0	6	73	0	2	81	181
Total Volume	37	0	43	0	80	1	288	31	0	320	0	0	0	0	0	22	290	0	2	314	714
% App Total	46.3%	0.0%	53.8%	0.0%		0.3%	90.0%	9.7%	0.0%		0.0%	0.0%	0.0%	0.0%		7.0%	92.4%	0.0%	0.6%		
PHF	.771	.000	.827	.000	.800	.250	.935	.705	.000	.909	.000	.000	.000	.000	.000	.786	.853	.000	.250	.853	.949

National Data and Surveying Services

City of Danville
All Vehicles & Uturns On Unshifted
Peds & Bikes On Bank 1
Nothing On Bank 2

(323) 782-0090
info@ndsdata.com

File Name : 17-7438-004 Avenida Nueva & Diablo Rd
Date : 5/13/2017

Bank 1 Count = Peds & Bikes

	Avenida Nueva Southbound					Diablo Rd Westbound					Avenida Nueva Northbound					Diablo Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
9:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
10:00	0	0	0	0	0	0	1	3	0	4	0	0	0	0	0	0	4	0	0	4	8	0
10:15	4	0	0	0	4	0	1	1	0	2	0	0	0	0	0	0	4	0	0	4	10	0
10:30	9	0	1	0	10	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	11	0
Total	13	0	1	0	14	0	3	5	0	8	0	0	0	0	0	0	8	0	0	8	30	0
10:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
11:00	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	0	1	0	0	1	4	0
11:15	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	19	0	0	19	21	0
11:30	1	0	3	0	4	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	10	0
Total	1	0	4	0	5	0	9	2	0	11	0	0	0	0	0	0	21	0	0	21	37	0
Grand Total	14	0	5	0	19	0	12	7	0	19	0	0	0	0	0	0	29	0	0	29	67	0
Apprch %	73.7%	0.0%	26.3%			0.0%	63.2%	36.8%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%				
Total %	20.9%	0.0%	7.5%		28.4%	0.0%	17.9%	10.4%		28.4%	0.0%	0.0%	0.0%		0.0%	0.0%	43.3%	0.0%		43.3%	100.0%	

AM PEAK HOUR	Avenida Nueva Southbound					Diablo Rd Westbound					Avenida Nueva Northbound					Diablo Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 10:30 to 11:30																					
Peak Hour For Entire Intersection Begins at 10:30																					
10:30	9	0	1	0	10	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	11
10:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
11:00	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	0	1	0	0	1	4
11:15	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	19	0	0	19	21
Total Volume	9	0	2	0	11	0	3	3	0	6	0	0	0	0	0	0	21	0	0	21	38
% App Total	81.8%	0.0%	18.2%			0.0%	50.0%	50.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.250	.000	.500		.275	.000	.750	.375		.500	.000	.000	.000		.000	.000	.276	.000		.276	.452

Avenida Nueva & Diablo Rd

Date: 5/13/2017

Day: Saturday

Project #: 17-7438-004

Peak Hour Summary	
AM Peak Hour	10:30 - 11:30
NOON Peak Hour	
PM Peak Hour	

Southbound Approach

Avenida Nueva

AM	43	0	37	0	53
NOON	0	0	0	0	0
PM	0	0	0	0	0

Eastbound Approach

Diablo Rd

	AM	NOON	PM
	333	0	0
	2	0	0
	22	0	0
	290	0	0
	0	0	0
	AM	NOON	PM

Westbound Approach

	AM	NOON	PM
	31	0	0
	288	0	0
	1	0	0
	0	0	0
	327	0	0
	AM	NOON	PM

CONTROL

Northbound Approach

AM	1	0	0	0	0
NOON	0	0	0	0	0
PM	0	0	0	0	0

Count Periods	Start	End
AM	9:45 AM	11:45 AM
NOON	NONE	NONE
PM	NONE	NONE

Total Ins & Outs

North Leg		
80	53	AM
0	0	NOON
0	0	PM

West Leg			East Leg		
AM	NOON	PM			
333	0	0	320	0	0
314	0	0	327	0	0
			AM	NOON	PM

South Leg		
1	0	AM
0	0	NOON
0	0	PM

Total Volume Per Leg

North Leg	
133	AM
0	NOON
0	PM

West Leg			East Leg		
AM	NOON	PM			
647	0	0	647	0	0
			AM	NOON	PM

South Leg	
1	AM
0	NOON
0	PM

Avenida Nueva & Diablo Rd

Date: 5/13/2017

Day: Saturday

Project #: 17-7438-004

Peak Hour Summary	
AM Peak Hour	10:30 - 11:30
NOON Peak Hour	
PM Peak Hour	

Southbound Approach

Avenida Nueva

AM	2	0	9	0	3	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

Eastbound Approach

Diablo Rd

AM	NOON	PM
5	0	0
0	0	0
0	0	0
21	0	0
0	0	0
AM	NOON	PM

Westbound Approach

AM	NOON	PM
3	0	0
3	0	0
0	0	0
0	0	0
30	0	0
AM	NOON	PM

CONTROL

Northbound Approach

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

Count Periods	Start	End
AM	9:45 AM	11:45 AM
NOON	NONE	NONE
PM	NONE	NONE

Total Ins & Outs

	North Leg		
	11	3	AM
	0	0	NOON
	0	0	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
5	0	0		6	0	0
21	0	0		30	0	0

	South Leg	
AM	0	0
NOON	0	0
PM	0	0

Total Volume Per Leg

	North Leg	
	14	AM
	0	NOON
	0	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
26	0	0		36	0	0

	South Leg
AM	0
NOON	0
PM	0

Average Daily Traffic (3-day Average) and Classification

Prepared by National Data & Surveying Services
CLASSIFICATION
Diablo Rd W/O Green Valley Rd

Day: Tuesday-Thursday
Date: 3/28/2017 - 3/30/2017

City: Danville
Project #: CA17_7204_001e

East Bound

Time		# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
0:00	AM	0	12	1	0	1	0	0	0	0	0	0	0	0	14
0:15		0	6	1	0	0	0	0	0	0	0	0	0	0	7
0:30		0	8	1	0	0	0	0	0	0	0	0	0	0	9
0:45		0	5	0	0	0	0	0	0	0	0	0	0	0	5
1:00		0	1	1	0	0	0	0	0	0	0	0	0	0	2
1:15		0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:30		0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45		0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00		0	2	0	0	1	0	0	0	0	0	0	0	0	3
2:15		0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:30		0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:45		0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00		0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:15		0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:30		0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45		0	1	1	0	0	0	0	0	0	0	0	0	0	2
4:00		0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:15		0	2	0	0	1	0	0	0	0	0	0	0	0	3
4:30		0	4	1	0	1	0	0	0	0	0	0	0	0	6
4:45		0	5	1	0	2	0	0	0	0	0	0	0	0	8
5:00		0	5	2	0	2	0	0	0	0	0	0	0	0	9
5:15		0	11	2	0	1	0	0	0	0	0	0	0	0	14
5:30		0	11	2	0	1	0	0	0	0	0	0	0	0	14
5:45		0	28	3	0	2	1	0	0	0	0	0	0	0	34
6:00		0	18	3	0	2	0	0	0	0	0	0	0	0	23
6:15		0	27	4	0	3	0	0	0	0	0	0	0	0	34
6:30		0	39	7	0	6	0	0	0	0	0	0	0	0	52
6:45		0	56	17	2	8	0	0	0	0	0	0	0	0	83
7:00		0	83	16	0	11	0	0	0	0	0	0	0	0	110
7:15		0	107	24	1	13	1	0	0	1	0	0	0	0	147
7:30		0	101	20	0	15	0	0	0	0	0	0	0	0	136
7:45		0	154	31	1	14	0	0	0	0	0	0	0	0	200
8:00		0	187	32	3	21	3	0	0	0	0	0	0	0	246
8:15		0	137	22	2	14	2	0	0	0	0	0	0	0	177
8:30		1	128	26	2	14	0	0	1	0	0	0	0	0	172
8:45		1	109	21	0	12	0	0	0	0	0	0	0	0	143
9:00		0	97	18	2	10	1	0	1	0	0	0	0	0	129
9:15		0	83	18	0	12	1	0	0	0	0	0	0	0	114
9:30		0	84	8	1	11	1	0	0	0	0	0	0	0	105
9:45		0	83	18	0	11	1	0	0	0	0	0	0	0	113
10:00		0	82	15	0	6	1	0	0	0	0	0	0	0	104
10:15		0	88	18	2	12	0	0	0	0	0	0	0	0	120
10:30		0	95	13	1	15	0	0	0	0	0	0	0	0	124
10:45		0	85	17	0	10	0	0	0	1	0	0	0	0	113
11:00		0	97	17	0	15	1	0	1	0	0	0	0	0	131
11:15		1	110	17	0	9	0	0	1	0	0	0	0	0	138
11:30		0	107	17	0	10	0	0	0	0	0	0	0	0	134
11:45		0	105	17	0	10	1	0	0	0	0	0	0	0	133
12:00	PM	1	116	12	1	9	0	0	1	0	0	0	0	0	140
12:15		0	113	13	0	11	0	0	0	0	0	0	0	0	137
12:30		0	128	19	1	11	1	0	0	0	0	0	0	0	160
12:45		0	133	15	0	11	0	0	0	0	0	0	0	0	159
13:00		0	111	16	0	6	0	0	0	0	0	0	0	0	133
13:15		0	118	16	0	11	0	0	1	0	0	0	0	0	146
13:30		1	121	16	0	13	1	0	0	0	0	0	0	0	152
13:45		0	107	16	0	10	0	0	0	0	0	0	0	0	133
14:00		0	142	18	0	12	1	0	0	0	0	0	0	0	173
14:15		1	115	16	2	10	0	0	1	0	0	0	0	0	145
14:30		0	124	16	1	10	1	0	0	0	0	0	0	0	152
14:45		0	151	18	0	13	0	0	0	0	0	0	0	0	182
15:00		0	177	30	1	14	1	0	0	0	0	0	0	0	223
15:15		0	196	33	3	12	1	0	0	0	0	0	0	0	245
15:30		0	216	29	2	13	0	0	0	0	0	0	0	0	260
15:45		1	195	21	1	16	0	0	0	0	0	0	0	0	234
16:00		0	181	26	1	12	1	0	0	0	0	0	0	0	221
16:15		0	180	23	0	12	0	0	0	0	0	0	0	0	215
16:30		0	186	23	2	14	0	0	0	0	0	0	0	0	225
16:45		0	197	22	1	15	1	0	1	1	0	0	0	0	238
17:00		0	231	27	1	16	1	0	0	0	0	0	0	0	276
17:15		0	219	25	2	14	1	0	1	0	0	0	0	0	262
17:30		1	187	26	0	13	0	0	0	0	0	0	0	0	227
17:45		0	185	21	1	13	0	0	0	0	0	0	0	0	220
18:00		0	195	26	1	12	1	0	0	0	0	0	0	0	235
18:15		1	173	18	1	10	0	0	0	0	0	0	0	0	203
18:30		0	179	23	1	10	0	0	0	0	0	0	0	0	213
18:45		0	174	19	0	11	0	0	0	0	0	0	0	0	204
19:00		0	124	15	0	7	0	0	0	0	0	0	0	0	146
19:15		0	110	14	0	7	0	0	0	0	0	0	0	0	131
19:30		0	108	14	0	6	0	0	0	0	0	0	0	0	128
19:45		0	102	10	0	5	0	0	0	0	0	0	0	0	117
20:00		0	97	10	0	5	0	0	0	0	0	0	0	0	112
20:15		0	90	10	0	4	0	0	0	0	0	0	0	0	104
20:30		0	92	6	0	4	0	0	0	0	0	0	0	0	102
20:45		0	79	8	0	6	0	0	0	0	0	0	0	0	93
21:00		0	63	7	0	3	0	0	0	0	0	0	0	0	73
21:15		0	52	6	0	5	0	0	0	0	0	0	0	0	63
21:30		0	58	4	0	3	0	0	0	0	0	0	0	0	65
21:45		0	45	4	0	2	0	0	0	0	0	0	0	0	51
22:00		0	43	7	0	2	0	0	0	0	0	0	0	0	52
22:15		0	36	5	0	3	0	0	0	0	0	0	0	0	44
22:30		0	25	3	0	2	0	0	0	0	0	0	0	0	30
22:45		0	23	1	0	1	0	0	0	0	0	0	0	0	25
23:00		0	18	2	0	0	0	0	0	0	0	0	0	0	20
23:15		0	21	2	0	2	0	0	0	0	0	0	0	0	25
23:30		0	12	0	0	0	0	0	0	0	0	0	0	0	12
23:45		0	9	1	0	0	0	0	0	0	0	0	0	0	10
Totals		9	8130	1144	40	677	25	0	9	3					10037
% of Totals		0%	81%	11%	0%	7%	0%		0%	0%					1
AM Volumes		3	2373	432	17	276	14	0	4	2	0	0	0	0	3012
% AM		0%	24%	4%	0%	3%	0%		0%	0%					30%
AM Peak Hour		8:00	7:45	7:45	7:45	7:30	7:30		8:15	6:30					7:45
Volume		2	605	111	8	65	5		2	1					796
PM Volumes		6	5757	712	23	401	11	0	5	1	0	0	0	0	6916
% PM		0%	57%	7%	0%	4%	0%		0%	0%					69%
PM Peak Hour		17:30	16:45	15:00	15:00	16:30	14:30		12:00	16:00					16:45
Volume		2	834	113	8	58	3		1	1					1003

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	1331	13%	1160	12%	1884	19%	5662	56%

Classification Definitions

1	Motorcycles	4	Buses	7	> =4-Axle Single Units	10	>=6-Axle Single Trailers	13	>=7-Axle Multi-Trailers
2	Passenger Cars	5	2-Axle, 6-Tire Single Units	8	<=4-Axle Single Trailers	11	<=5-Axle Multi-Trailers		
3	2-Axle, 4-Tire Single Units	6	3-Axle Single Units	9	5-Axle Single Trailers	12	6-Axle Multi-Trailers		

Prepared by National Data & Surveying Services
CLASSIFICATION
Diablo Rd W/O Green Valley Rd

Day: Tuesday-Thursday
Date: 3/28/2017 - 3/30/2017

City: Danville
Project #: CA17_7204_001w

West Bound

Time		# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
0:00	AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
0:15		0	3	0	0	0	0	0	0	0	0	0	0	0	3
0:30		0	1	0	0	0	0	0	0	0	0	0	0	0	1
0:45		0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:00		0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:15		0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:30		0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45		0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00		0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:15		0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30		0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45		0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00		0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:15		0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:30		0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:45		0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00		0	4	1	0	0	0	0	0	0	0	0	0	0	5
4:15		0	9	1	0	0	0	0	0	0	0	0	0	0	10
4:30		0	9	2	0	1	0	0	0	0	0	0	0	0	12
4:45		0	11	1	0	0	0	0	0	0	0	0	0	0	12
5:00		0	23	4	0	1	0	0	0	0	0	0	0	0	28
5:15		0	24	3	0	2	0	0	0	0	0	0	0	0	29
5:30		0	35	3	0	1	0	0	0	0	0	0	0	0	39
5:45		0	35	3	0	1	0	0	0	0	0	0	0	0	39
6:00		0	41	6	0	2	0	0	0	0	0	0	0	0	49
6:15		0	63	6	1	2	0	0	0	0	0	0	0	0	72
6:30		0	70	7	0	3	0	0	0	0	0	0	0	0	80
6:45		0	79	9	0	4	0	0	0	0	0	0	0	0	92
7:00		0	114	11	0	4	0	0	0	0	0	0	0	0	129
7:15		0	166	17	0	5	1	0	0	0	0	0	0	0	189
7:30		0	194	24	0	8	1	0	0	0	0	0	0	0	227
7:45		0	173	18	1	8	1	0	0	0	0	0	0	0	201
8:00		0	164	21	0	8	1	0	0	0	0	0	0	0	194
8:15		0	198	25	0	8	1	0	0	0	0	0	0	0	232
8:30		0	203	28	1	12	2	0	0	0	0	0	0	0	246
8:45		1	165	21	1	8	1	0	0	0	0	0	0	0	197
9:00		0	129	19	0	8	1	0	0	0	0	0	0	0	157
9:15		0	128	18	1	8	1	0	1	0	0	0	0	0	157
9:30		0	119	17	0	8	1	0	0	0	0	0	0	0	145
9:45		1	129	19	0	7	1	0	0	0	0	0	0	0	157
10:00		0	113	21	0	8	1	0	0	0	0	0	0	0	143
10:15		0	123	22	0	8	2	0	0	0	0	0	0	0	155
10:30		0	119	19	0	10	1	0	0	0	0	0	0	0	149
10:45		0	140	20	0	7	2	0	0	0	0	0	0	0	169
11:00		0	114	17	0	6	1	0	0	0	0	0	0	0	138
11:15		0	110	23	0	8	1	0	0	0	0	0	0	0	142
11:30		1	132	20	0	8	1	0	0	0	0	0	0	0	162
11:45		1	134	20	0	7	1	0	0	0	0	0	0	0	163
12:00	PM	0	135	21	0	8	1	0	0	1	0	0	0	0	166
12:15		0	142	22	0	8	1	0	0	0	0	0	0	0	173
12:30		0	119	16	1	8	1	0	0	0	0	0	0	0	145
12:45		1	136	21	0	7	1	0	0	0	0	0	0	0	166
13:00		0	119	18	0	8	1	0	0	0	0	0	0	0	146
13:15		0	121	17	0	7	1	0	0	0	0	0	0	0	146
13:30		0	126	18	1	6	1	0	0	0	0	0	0	0	152
13:45		0	121	17	0	9	1	0	0	0	0	0	0	0	148
14:00		1	116	19	1	6	1	0	0	0	0	0	0	0	144
14:15		0	130	18	0	8	2	0	0	0	0	0	0	0	158
14:30		0	152	21	1	10	1	0	0	0	0	0	0	0	185
14:45		0	159	27	1	8	2	0	0	0	0	0	0	0	197
15:00		0	174	26	0	8	2	0	0	0	0	0	0	0	210
15:15		0	160	25	0	9	1	0	0	0	0	0	0	0	195
15:30		0	162	23	0	10	2	0	0	0	0	0	0	0	197
15:45		0	191	32	3	14	1	0	0	0	0	0	0	0	241
16:00		1	116	20	0	10	1	0	0	0	0	0	0	0	148
16:15		0	140	22	0	8	1	0	0	0	0	0	0	0	171
16:30		0	127	22	0	8	1	0	0	0	0	0	0	0	158
16:45		1	126	19	0	8	1	0	1	0	0	0	0	0	156
17:00		0	126	19	0	8	0	0	0	0	0	0	0	0	153
17:15		0	130	16	0	6	1	0	0	0	0	0	0	0	153
17:30		0	110	16	0	5	1	0	0	0	0	0	0	0	132
17:45		0	124	17	1	6	0	0	0	0	0	0	0	0	148
18:00		1	118	20	0	7	1	0	0	0	0	0	0	0	147
18:15		0	117	14	0	5	0	0	0	0	0	0	0	0	136
18:30		0	102	13	0	5	0	0	0	0	0	0	0	0	120
18:45		0	109	13	0	4	0	0	0	0	0	0	0	0	126
19:00		0	105	12	0	6	0	0	0	0	0	0	0	0	123
19:15		0	101	15	0	5	0	0	0	0	0	0	0	0	121
19:30		0	71	9	0	3	0	0	0	0	0	0	0	0	83
19:45		0	67	9	0	3	0	0	0	0	0	0	0	0	79
20:00		0	68	8	0	2	1	0	0	0	0	0	0	0	79
20:15		0	58	8	0	2	0	0	0	0	0	0	0	0	68
20:30		0	58	6	0	2	0	0	0	0	0	0	0	0	66
20:45		0	84	12	0	5	0	0	0	0	0	0	0	0	101
21:00		0	59	6	0	2	0	0	0	0	0	0	0	0	67
21:15		0	36	3	0	1	0	0	0	0	0	0	0	0	40
21:30		0	30	3	0	1	0	0	0	0	0	0	0	0	34
21:45		0	25	2	0	2	0	0	0	0	0	0	0	0	29
22:00		0	20	2	0	1	0	0	0	0	0	0	0	0	23
22:15		0	15	1	0	0	0	0	0	0	0	0	0	0	16
22:30		0	17	2	0	1	0	0	0	0	0	0	0	0	20
22:45		0	13	1	0	0	0	0	0	0	0	0	0	0	14
23:00		0	11	1	0	0	0	0	0	0	0	0	0	0	12
23:15		0	5	0	0	0	0	0	0	0	0	0	0	0	5
23:30		0	5	1	0	0	0	0	0	0	0	0	0	0	6
23:45		0	4	0	0	0	0	0	0	0	0	0	0	0	4
Totals		9	7851	1099	14	421	50		2	1					9447
% of Totals		0%	83%	12%	0%	4%	1%		0%	0%					1
AM Volumes		4	3291	446	5	171	22	0	1	0	0	0	0	0	3940
% AM		0%	35%	5%	0%	2%	0%		0%						42%
AM Peak Hour		10:45	7:45	8:00	8:30	7:45	8:00		8:30	9:00					7:45
Volume		2	738	95	2	36	6		1	1					874
PM Volumes		5	4560	653	9	250	28	0	1	1	0	0	0	0	5507
% PM		0%	48%	7%	0%	3%	0%		0%	0%					58%
PM Peak Hour		12:15	15:00	15:00	15:00	15:15	14:15	12:00	15:00	12:00					15:00
Volume		2	687	106	3	43	7	1	1	1					845

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	1615	17%	1242	13%	1219	13%	5371	57%

Classification Definitions

1	Motorcycles	4	Buses	7	> =4-Axle Single Units	10	>=6-Axle Single Trailers	13	>=7-Axle Multi-Trailers
2	Passenger Cars	5	2-Axle, 6-Tire Single Units	8	<=4-Axle Single Trailers	11	<=5-Axle Multi-Trailers		
3	2-Axle, 4-Tire Single Units	6	3-Axle Single Units	9	5-Axle Single Trailers	12	6-Axle Multi-Trailers		

Prepared by National Data & Surveying Services
CLASSIFICATION
Diablo Rd W/O Green Valley Rd

Day: Tuesday-Thursday
Date: 3/28/2017 - 3/30/2017

City: Danville
Project #: CA17_7204_001

Summary

Time		# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
0:00	AM	0	13	1	0	0	0	0	0	0	0	0	0	0	14
0:15		0	8	0	0	0	0	0	0	0	0	0	0	0	8
0:30		0	7	0	0	1	0	0	0	0	0	0	0	0	8
0:45		0	6	0	0	0	0	0	0	0	0	0	0	0	6
1:00		0	5	1	0	0	0	0	0	0	0	0	0	0	6
1:15		0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:30		0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:45		0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00		0	2	1	0	0	0	0	0	0	0	0	0	0	3
2:15		0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:30		0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:45		0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:00		0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:15		0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:30		0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:45		0	3	1	0	0	0	0	0	0	0	0	0	0	4
4:00		0	6	1	0	0	0	0	0	0	0	0	0	0	7
4:15		0	11	1	0	1	0	0	0	0	0	0	0	0	13
4:30		0	13	3	0	1	0	0	0	0	0	0	0	0	17
4:45		0	17	1	0	2	0	0	0	0	0	0	0	0	20
5:00		0	28	6	0	4	0	0	0	0	0	0	0	0	38
5:15		0	36	4	0	3	0	0	0	0	0	0	0	0	43
5:30		0	45	5	0	3	0	0	0	0	0	0	0	0	53
5:45		0	58	7	0	3	1	0	0	0	0	0	0	0	69
6:00		0	58	9	0	5	0	0	0	0	0	0	0	0	72
6:15		0	84	9	1	5	0	0	0	0	0	0	0	0	99
6:30		0	110	15	0	9	0	0	0	0	0	0	0	0	134
6:45		0	138	26	1	12	0	0	0	0	0	0	0	0	177
7:00		0	197	29	0	18	0	0	0	0	0	0	0	0	244
7:15		0	273	38	1	19	2	0	0	0	0	0	0	0	333
7:30		0	294	45	0	22	1	0	0	0	0	0	0	0	362
7:45		0	329	48	2	24	2	0	0	0	0	0	0	0	405
8:00		0	347	52	3	28	4	0	0	0	0	0	0	0	434
8:15		0	341	48	1	23	2	0	0	0	0	0	0	0	415
8:30		1	322	51	2	25	2	0	1	0	0	0	0	0	404
8:45		1	276	42	1	19	1	0	0	0	0	0	0	0	340
9:00		0	236	39	1	19	2	0	1	0	0	0	0	0	298
9:15		0	215	37	1	19	2	0	1	0	0	0	0	0	275
9:30		1	205	29	1	20	2	0	1	0	0	0	0	0	259
9:45		1	208	38	0	18	2	0	0	0	0	0	0	0	267
10:00		0	193	36	1	14	1	0	0	0	0	0	0	0	245
10:15		0	203	36	1	20	2	0	0	0	0	0	0	0	262
10:30		0	217	33	1	23	1	0	0	0	0	0	0	0	275
10:45		0	227	37	1	19	2	0	0	0	0	0	0	0	286
11:00		0	207	33	0	18	2	0	1	0	0	0	0	0	261
11:15		1	220	39	0	16	1	0	0	1	0	0	0	0	278
11:30		1	234	36	1	20	1	0	1	0	0	0	0	0	294
11:45		1	242	36	1	17	1	0	0	0	0	0	0	0	298
12:00	PM	0	257	35	1	17	2	0	0	1	0	0	0	0	313
12:15		0	260	37	0	19	1	0	1	0	0	0	0	0	318
12:30		0	245	33	1	20	2	0	0	0	0	0	0	0	301
12:45		1	262	35	0	20	1	0	0	0	0	0	0	0	319
13:00		0	228	33	0	16	1	0	0	0	0	0	0	0	278
13:15		0	235	34	0	20	1	0	1	0	0	0	0	0	291
13:30		1	242	35	1	17	2	0	0	0	0	0	0	0	298
13:45		1	241	34	2	19	1	0	0	0	0	0	0	0	298
14:00		1	254	37	1	16	1	0	0	0	0	0	0	0	310
14:15		1	257	34	2	19	2	0	1	0	0	0	0	0	316
14:30		1	274	39	1	20	2	0	0	0	0	0	0	0	337
14:45		0	308	45	1	21	2	0	0	0	0	0	0	0	377
15:00		0	349	52	1	22	3	0	0	0	0	0	0	0	427
15:15		1	356	54	3	20	2	0	0	0	0	0	0	0	436
15:30		0	379	52	3	24	2	0	0	0	0	0	0	0	460
15:45		1	381	54	4	28	2	0	1	0	0	0	0	0	471
16:00		1	296	45	1	22	1	0	0	0	0	0	0	0	366
16:15		0	320	45	1	20	2	0	0	0	0	0	0	0	388
16:30		0	318	45	2	22	1	0	0	0	0	0	0	0	388
16:45		1	324	43	1	23	1	0	1	0	0	0	0	0	394
17:00		0	353	47	1	23	1	0	0	0	0	0	0	0	425
17:15		1	338	41	2	21	2	0	1	0	0	0	0	0	406
17:30		0	308	43	1	19	1	0	0	0	0	0	0	0	372
17:45		0	317	42	2	18	1	0	0	0	0	0	0	0	380
18:00		1	314	45	1	20	1	0	0	0	0	0	0	0	382
18:15		0	297	32	1	15	0	0	0	0	0	0	0	0	345
18:30		0	283	35	2	16	0	0	0	0	0	0	0	0	336
18:45		1	288	34	1	15	0	0	0	0	0	0	0	0	339
19:00		1	232	26	0	14	0	0	0	0	0	0	0	0	273
19:15		0	220	28	0	13	0	0	0	0	0	0	0	0	261
19:30		0	177	23	0	9	0	0	0	0	0	0	0	0	209
19:45		0	171	19	0	9	0	0	0	0	0	0	0	0	199
20:00		0	173	18	0	8	1	0	0	0	0	0	0	0	200
20:15		0	155	18	0	7	0	0	0	0	0	0	0	0	180
20:30		0	149	14	0	7	0	0	0	0	0	0	0	0	170
20:45		0	162	20	0	11	0	0	0	0	0	0	0	0	193
21:00		0	127	13	0	5	0	0	0	0	0	0	0	0	145
21:15		0	89	9	0	5	0	0	0	0	0	0	0	0	103
21:30		0	79	7	0	4	0	0	0	0	0	0	0	0	90
21:45		0	74	5	0	4	0	0	0	0	0	0	0	0	83
22:00		0	58	7	0	4	0	0	0	0	0	0	0	0	69
22:15		0	46	5	0	2	0	0	0	0	0	0	0	0	53
22:30		0	38	4	0	2	0	0	0	0	0	0	0	0	44
22:45		0	35	3	0	1	0	0	0	0	0	0	0	0	39
23:00		0	29	4	0	1	0	0	0	0	0	0	0	0	34
23:15		0	22	1	0	1	0	0	0	0	0	0	0	0	24
23:30		0	15	1	0	0	0	0	0	0	0	0	0	0	16
23:45		0	11	1	0	0	0	0	0	0	0	0	0	0	12
Totals		21	15998	2239	58	1109	73		12	2					19512
% of Totals		0%	82%	11%	0%	6%	0%		0%	0%					1
AM Volumes		7	5652	873	21	450	34	0	6	1	0	0	0	0	7044
% AM		0%	29%	4%	0%	2%	0%		0%	0%					36%
AM Peak Hour		8:00	7:45	7:45	7:45	7:45	7:45		8:30	11:15					7:45
Volume		3	1340	200	8	100	10		3	2					1662
PM Volumes		14	10346	1366	37	659	39	0	6	1	0	0	0	0	12468
% PM		0%	53%	7%	0%	3%	0%		0%	0%					64%
PM Peak Hour		12:45	15:00	15:00	15:00	15:00	14:15	12:00	16:30	12:00					15:00
Volume		3	1465	212	11	94	9	1	2	1					1793

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	2937	15%	2416	12%	3119	16%	11040	57%

Classification Definitions

1	Motorcycles	4	Buses	7	> =4-Axle Single Units	10	>=6-Axle Single Trailers	13	>=7-Axle Multi-Trailers
2	Passenger Cars	5	2-Axle, 6-Tire Single Units	8	<=4-Axle Single Trailers	11	<=5-Axle Multi-Trailers		
3	2-Axle, 4-Tire Single Units	6	3-Axle Single Units	9	5-Axle Single Trailers	12	6-Axle Multi-Trailers		

Prepared by National Data & Surveying Services
CLASSIFICATION
Diablo Rd W/O Green Valley Rd

Day: Tuesday-Thursday
Date: 3/28/2017 - 3/30/2017

City: Danville
Project #: CA17_7204_001e

East Bound

Time		# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
0:00	AM	0	26	2	0	1	0	0	0	0	0	0	0	0	29
1:00		0	6	1	0	0	0	0	0	0	0	0	0	0	7
2:00		0	5	1	0	0	0	0	0	0	0	0	0	0	6
3:00		0	4	1	0	0	0	0	0	0	0	0	0	0	5
4:00		0	14	1	0	3	0	0	0	0	0	0	0	0	18
5:00		0	51	10	0	7	1	0	0	0	0	0	0	0	69
6:00		0	138	32	2	20	0	0	0	0	0	0	0	0	192
7:00		0	447	90	3	57	2	0	1	1	0	0	0	0	601
8:00		2	557	99	6	60	4	0	2	0	0	0	0	0	730
9:00		0	359	70	2	45	3	0	1	0	0	0	0	0	480
10:00		0	345	59	3	43	1	0	0	0	0	0	0	0	451
11:00		1	413	65	1	41	2	0	1	1	0	0	0	0	525
12:00	PM	0	492	61	1	44	2	0	1	0	0	0	0	0	601
13:00		1	459	65	2	42	1	0	1	0	0	0	0	0	571
14:00		1	536	70	3	45	2	0	1	0	0	0	0	0	658
15:00		1	777	106	8	53	2	0	1	0	0	0	0	0	948
16:00		0	749	94	4	53	2	0	0	0	0	0	0	0	902
17:00		1	827	103	5	56	3	0	0	0	0	0	0	0	995
18:00		1	736	87	4	45	1	0	0	0	0	0	0	0	874
19:00		0	457	51	0	28	0	0	0	0	0	0	0	0	536
20:00		0	372	34	0	21	0	0	0	0	0	0	0	0	427
21:00		0	218	20	0	13	0	0	0	0	0	0	0	0	251
22:00		0	111	12	0	6	0	0	0	0	0	0	0	0	129
23:00		0	52	5	0	2	0	0	0	0	0	0	0	0	59
Totals		8	8151	1139	44	685	26		9	2					10064
% of Totals		0%	81%	11%	0%	7%	0%		0%	0%					1
AM Volumes		3	2365	431	17	277	13	0	5	2	0	0	0	0	3113
% AM		0%	23%	4%	0%	3%	0%		0%	0%					31%
AM Peak Hour		8:00	8:00	8:00	8:00	8:00	8:00		8:00	7:00					8:00
Volume		2	557	99	6	60	4		2	1					730
PM Volumes		5	5786	708	27	408	13	0	4	0	0	0	0	0	6951
% PM		0%	57%	7%	0%	4%	0%		0%						69%
PM Peak Hour		13:00	17:00	15:00	15:00	17:00	17:00		12:00						17:00
Volume		1	827	106	8	56	3		1						995

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	1331	13%	1172	12%	1897	19%	5664	56%

Classification Definitions

1	Motorcycles	4	Buses	7	> =4-Axle Single Units	10	>=6-Axle Single Trailers	13	>=7-Axle Multi-Trailers
2	Passenger Cars	5	2-Axle, 6-Tire Single Units	8	<=4-Axle Single Trailers	11	<=5-Axle Multi-Trailers		
3	2-Axle, 4-Tire Single Units	6	3-Axle Single Units	9	5-Axle Single Trailers	12	6-Axle Multi-Trailers		

Prepared by National Data & Surveying Services
CLASSIFICATION
Diablo Rd W/O Green Valley Rd

Day: Tuesday-Thursday
Date: 3/28/2017 - 3/30/2017

City: Danville
Project #: CA17_7204_001w

West Bound

Time		# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
0:00	AM	0	9	0	0	1	0	0	0	0	0	0	0	0	10
1:00		0	4	0	0	0	0	0	0	0	0	0	0	0	4
2:00		0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:00		0	7	0	0	0	0	0	0	0	0	0	0	0	7
4:00		0	33	5	0	1	0	0	0	0	0	0	0	0	39
5:00		0	116	13	0	5	0	0	0	0	0	0	0	0	134
6:00		0	252	28	1	11	0	0	0	0	0	0	0	0	292
7:00		0	646	70	1	25	3	0	0	0	0	0	0	0	745
8:00		1	730	95	1	36	6	0	0	0	0	0	0	0	869
9:00		1	505	73	1	30	4	0	1	1	0	0	0	0	616
10:00		0	495	82	0	33	5	0	0	1	0	0	0	0	616
11:00		2	489	79	1	29	4	0	1	0	0	0	0	0	605
12:00	PM	1	531	80	1	32	4	1	0	1	0	0	0	0	651
13:00		1	487	70	1	31	3	0	0	0	0	0	0	0	593
14:00		2	557	85	2	32	5	1	0	0	0	0	0	0	684
15:00		1	687	106	3	41	7	0	1	0	0	0	0	0	846
16:00		1	509	83	0	34	3	0	1	0	0	0	0	0	631
17:00		1	490	69	1	25	3	0	0	1	0	0	0	0	590
18:00		1	446	60	0	20	1	1	0	1	0	0	0	0	530
19:00		1	344	45	0	17	0	0	0	0	0	0	0	0	407
20:00		0	267	35	0	11	1	0	0	0	0	0	0	0	314
21:00		0	150	14	0	5	0	0	0	0	0	0	0	0	169
22:00		0	65	6	0	2	0	0	0	0	0	0	0	0	73
23:00		0	25	3	0	0	0	0	0	0	0	0	0	0	28
Totals		13	7846	1101	13	421	49	3	4	5					9455
% of Totals		0%	83%	12%	0%	4%	1%	0%	0%	0%					100%
AM Volumes		4	3288	445	5	171	22	0	2	2	0	0	0	0	3939
% AM		0%	35%	5%	0%	2%	0%		0%	0%					42%
AM Peak Hour		11:00	8:00	8:00	6:00	8:00	8:00		9:00	9:00					8:00
Volume		2	730	95	1	36	6		1	1					869
PM Volumes		9	4558	656	8	250	27	3	2	3	0	0	0	0	5516
% PM		0%	48%	7%	0%	3%	0%	0%	0%	0%					58%
PM Peak Hour		14:00	15:00	15:00	15:00	15:00	15:00	12:00	15:00	12:00					15:00
Volume		2	687	106	3	41	7	1	1	1					846

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	1614	17%	1244	13%	1221	13%	5376	57%

Classification Definitions

1 Motorcycles
2 Passenger Cars
3 2-Axle, 4-Tire Single Units
4 Buses
5 2-Axle, 6-Tire Single Units
6 3-Axle Single Units
7 > =4-Axle Single Units
8 <=4-Axle Single Trailers
9 5-Axle Single Trailers
10 >=6-Axle Single Trailers
11 <=5-Axle Multi-Trailers
12 6-Axle Multi-Trailers
13 >=7-Axle Multi-Trailers

Prepared by National Data & Surveying Services
CLASSIFICATION
Diablo Rd W/O Green Valley Rd

Day: Tuesday-Thursday
Date: 3/28/2017 - 3/30/2017

City: Danville
Project #: CA17_7204_001

Summary

Time		# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
0:00	AM	0	34	2	0	1	0	0	0	0	0	0	0	0	37
1:00		0	9	1	0	0	0	0	0	0	0	0	0	0	10
2:00		0	7	1	0	0	0	0	0	0	0	0	0	0	8
3:00		0	11	1	0	0	0	0	0	0	0	0	0	0	12
4:00		0	46	6	0	4	0	0	0	0	0	0	0	0	56
5:00		0	167	23	0	12	1	0	0	0	0	0	0	0	203
6:00		0	390	60	3	31	0	0	0	0	0	0	0	0	484
7:00		0	1093	160	3	82	5	0	1	1	0	0	0	0	1345
8:00		3	1287	194	7	96	10	0	2	1	0	0	0	0	1600
9:00		1	864	143	3	76	8	0	2	1	0	0	0	0	1098
10:00		0	840	141	3	76	6	0	1	1	0	0	0	0	1068
11:00		3	903	144	2	71	6	0	2	1	0	0	0	0	1132
12:00	PM	2	1024	141	2	76	6	1	1	1	0	0	0	0	1254
13:00		3	946	135	3	73	4	0	1	1	0	0	0	0	1166
14:00		2	1093	154	5	77	7	1	1	1	0	0	0	0	1341
15:00		2	1465	212	11	94	9	0	1	0	0	0	0	0	1794
16:00		2	1258	178	5	87	5	0	1	0	0	0	0	0	1536
17:00		2	1316	172	6	81	6	0	1	1	0	0	0	0	1585
18:00		2	1183	147	5	66	2	1	0	1	0	0	0	0	1407
19:00		1	800	96	0	44	0	0	0	0	0	0	0	0	941
20:00		0	639	70	0	32	1	0	0	0	0	0	0	0	742
21:00		0	368	34	0	18	0	0	0	0	0	0	0	0	420
22:00		0	177	19	0	9	0	0	0	0	0	0	0	0	205
23:00		0	77	8	0	2	0	0	0	0	0	0	0	0	87
Totals		23	15997	2242	58	1108	76	3	14	10					19531
% of Totals		0%	82%	11%	0%	6%	0%	0%	0%	0%					100%
AM Volumes		7	5651	876	21	449	36	0	8	5	0	0	0	0	7053
% AM		0%	29%	4%	0%	2%	0%		0%	0%					36%
AM Peak Hour		8:00	8:00	8:00	8:00	8:00	8:00		8:00	7:00					8:00
Volume		3	1287	194	7	96	10		2	1					1600
PM Volumes		16	10346	1366	37	659	40	3	6	5	0	0	0	0	12478
% PM		0%	53%	7%	0%	3%	0%	0%	0%	0%					64%
PM Peak Hour		13:00	15:00	15:00	15:00	15:00	15:00	12:00	12:00	12:00					15:00
Volume		3	1465	212	11	94	9	1	1	1					1794

Directional Peak Periods

All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	2945	15%	2420	12%	3121	16%	11045	57%

Classification Definitions

1	Motorcycles	4	Buses	7	> =4-Axle Single Units	10	>=6-Axle Single Trailers	13	>=7-Axle Multi-Trailers
2	Passenger Cars	5	2-Axle, 6-Tire Single Units	8	<=4-Axle Single Trailers	11	<=5-Axle Multi-Trailers		
3	2-Axle, 4-Tire Single Units	6	3-Axle Single Units	9	5-Axle Single Trailers	12	6-Axle Multi-Trailers		

Prepared by National Data & Surveying Services
VOLUME
Diablo Rd W/O Green Valley Rd
Day: Tuesday-Thursday
Date: 3/28/2017 - 3/30/2017

City: Danville
Project #: CA17_7204_001

DAILY TOTALS	EB	WB	Total
	10064	9465	19529

AM Period	EB		WB		TOTAL		PM Period	EB		WB		TOTAL	
0:00	11		3		14		12:00	147		167		314	
0:15	6		3		9		12:15	144		174		318	
0:30	7		1		8		12:30	156		144		300	
0:45	4	28	2	9	6	37	12:45	154	601	166	651	320	1252
1:00	3		2		5		13:00	132		146		278	
1:15	1		1		2		13:15	144		147		291	
1:30	1		0		1		13:30	145		153		298	
1:45	1	6	1	4	2	10	13:45	149	570	149	595	298	1165
2:00	2		1		3		14:00	167		144		311	
2:15	2		0		2		14:15	157		158		315	
2:30	1		0		1		14:30	153		185		338	
2:45	1	6	1	2	2	8	14:45	181	658	197	684	378	1342
3:00	2		1		3		15:00	216		210		426	
3:15	1		2		3		15:15	241		196		437	
3:30	0		2		2		15:30	263		198		461	
3:45	2	5	2	7	4	12	15:45	228	948	241	845	469	1793
4:00	2		5		7		16:00	219		147		366	
4:15	3		10		13		16:15	216		172		388	
4:30	6		12		18		16:30	229		159		388	
4:45	7	18	12	39	19	57	16:45	240	904	155	633	395	1537
5:00	9		28		37		17:00	271		154		425	
5:15	15		29		44		17:15	252		154		406	
5:30	14		39		53		17:30	240		132		372	
5:45	30	68	39	135	69	203	17:45	232	995	148	588	380	1583
6:00	24		48		72		18:00	236		147		383	
6:15	28		72		100		18:15	210		137		347	
6:30	54		80		134		18:30	216		120		336	
6:45	85	191	92	292	177	483	18:45	213	875	126	530	339	1405
7:00	114		129		243		19:00	150		123		273	
7:15	144		190		334		19:15	140		121		261	
7:30	137		226		363		19:30	127		83		210	
7:45	204	599	201	746	405	1345	19:45	119	536	79	406	198	942
8:00	239		195		434		20:00	120		80		200	
8:15	185		232		417		20:15	112		68		180	
8:30	160		246		406		20:30	104		67		171	
8:45	146	730	197	870	343	1600	20:45	93	429	101	316	194	745
9:00	142		157		299		21:00	77		67		144	
9:15	118		156		274		21:15	63		39		102	
9:30	111		146		257		21:30	56		34		90	
9:45	110	481	158	617	268	1098	21:45	54	250	29	169	83	419
10:00	102		144		246		22:00	46		23		69	
10:15	107		155		262		22:15	36		17		53	
10:30	126		149		275		22:30	24		20		44	
10:45	117	452	170	618	287	1070	22:45	25	131	14	74	39	205
11:00	122		139		261		23:00	20		13		33	
11:15	136		142		278		23:15	19		6		25	
11:30	132		162		294		23:30	10		6		16	
11:45	135	525	163	606	298	1131	23:45	9	58	4	29	13	87
TOTALS		3109		3945		7054	TOTALS		6955		5520		12475
SPLIT %		44.1%		55.9%		36.1%	SPLIT %		55.8%		44.2%		63.9%

DAILY TOTALS

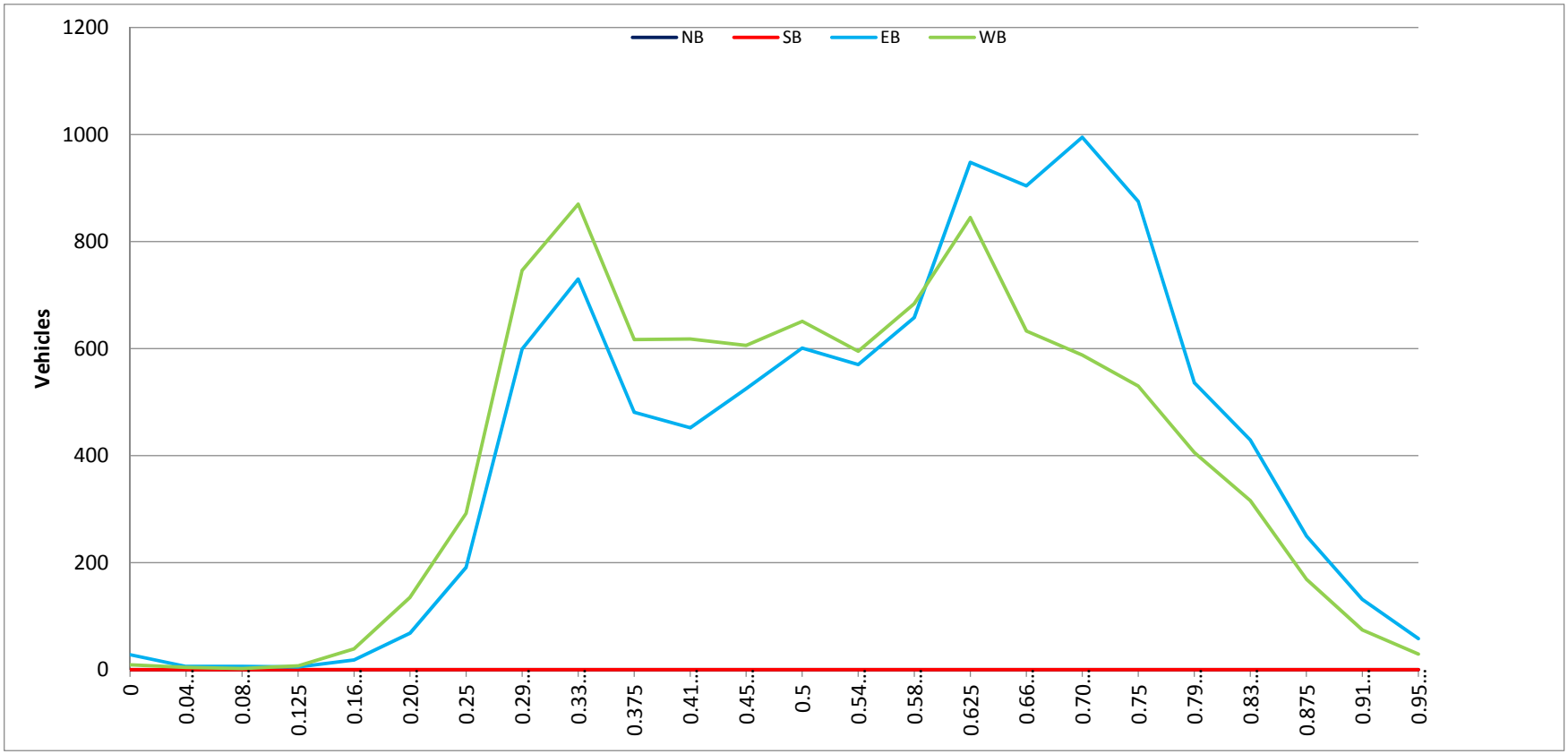
DAILY TOTALS	EB	WB	Total
	9970	9267	19237

AM Peak Hour	7:45	7:45	7:45	PM Peak Hour	16:45	15:00	15:00
AM Pk Volume	788	874	1662	PM Pk Volume	1003	845	1793
Pk Hr Factor	0.824	0.888	0.957	Pk Hr Factor	0.925	0.877	0.956
7 - 9 Volume	1329	1616	2945	4 - 6 Volume	1899	1221	3120
7 - 9 Peak Hour	7:45	7:45	7:45	4 - 6 Peak Hour	16:45	16:15	16:30
7 - 9 Pk Volume	788	874	1662	4 - 6 Pk Volume	1003	640	1614
Pk Hr Factor	0.824	0.888	0.957	Pk Hr Factor	0.925	0.930	0.949

Prepared by NDS/ATD

Project #: CA17_7204_001 City: Danville

Location: Diablo Rd W/O Green Valley Rd Date: 3/28/2017 - 3/30/2017



Prepared by National Data & Surveying Services
CLASSIFICATION
Blackhawk Rd E/O Still Creek Rd

Day: Tuesday-Thursday
Date: 3/28/2017 - 3/30/2017

City: Danville
Project #: CA17_7204_001e

East Bound

Time		# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
0:00	AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
0:15		0	2	0	0	0	0	0	0	0	0	0	0	0	2
0:30		0	3	0	0	0	0	0	0	0	0	0	0	0	3
0:45		0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:00		0	1	1	0	0	0	0	0	0	0	0	0	0	2
1:15		0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:30		0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45		0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00		0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15		0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:30		0	0	0	0	1	0	0	0	0	0	0	0	0	1
2:45		0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00		0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:15		0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30		0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45		0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00		0	1	1	0	0	0	0	0	0	0	0	0	0	2
4:15		0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30		0	3	0	0	0	0	0	0	0	0	0	0	0	3
4:45		0	3	0	0	0	0	0	0	0	0	0	0	0	3
5:00		0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:15		0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:30		0	4	1	0	1	0	0	0	0	0	0	0	0	6
5:45		0	6	2	0	0	0	0	0	0	0	0	0	0	8
6:00		0	4	1	0	0	0	0	0	0	0	0	0	0	5
6:15		0	14	4	1	1	0	0	0	0	0	0	0	0	20
6:30		0	19	3	0	2	0	0	0	0	0	0	0	0	24
6:45		0	17	6	0	2	0	0	0	0	0	0	0	0	25
7:00		0	34	7	1	3	0	0	0	0	0	0	0	0	45
7:15		0	91	11	0	5	0	0	0	0	0	0	0	0	107
7:30		0	80	11	0	3	0	0	0	0	0	0	0	0	94
7:45		0	72	12	1	8	0	0	0	0	0	0	0	0	93
8:00		0	79	14	1	6	1	0	0	0	0	0	0	0	101
8:15		0	57	10	1	6	0	0	0	0	0	0	0	0	74
8:30		0	74	11	0	7	1	0	0	0	0	0	0	0	93
8:45		0	55	12	0	9	0	0	0	0	0	0	0	0	76
9:00		0	46	8	0	5	0	0	0	0	0	0	0	0	59
9:15		0	45	7	0	4	0	0	0	0	0	0	0	0	56
9:30		0	43	8	0	4	0	0	0	0	0	0	0	0	55
9:45		0	38	12	0	2	1	0	0	0	0	0	0	0	53
10:00		0	47	9	0	3	0	0	0	0	0	0	0	0	59
10:15		0	45	10	0	5	0	0	0	0	0	0	0	0	60
10:30		0	42	11	0	4	0	0	0	0	0	0	0	0	57
10:45		0	42	9	0	7	0	0	0	0	0	0	0	0	58
11:00		0	44	8	0	5	0	0	0	0	0	0	0	0	57
11:15		1	53	10	0	4	1	0	0	0	0	0	0	0	69
11:30		1	47	9	0	1	0	0	0	0	0	0	0	0	58
11:45		0	51	8	0	3	0	0	0	0	0	0	0	0	62
12:00	PM	0	53	3	0	3	0	0	0	0	0	0	0	0	59
12:15		0	49	8	0	6	0	0	0	0	0	0	0	0	63
12:30		0	57	8	0	4	0	0	0	0	0	0	0	0	69
12:45		0	75	10	0	4	0	0	0	0	0	0	0	0	89
13:00		1	61	9	0	3	1	0	0	0	0	0	0	0	75
13:15		0	49	6	0	3	0	0	0	0	0	0	0	0	58
13:30		0	49	8	1	2	0	0	0	0	0	0	0	0	60
13:45		1	47	7	0	4	0	0	0	0	0	0	0	0	59
14:00		0	46	12	0	3	0	0	0	0	0	0	0	0	61
14:15		1	60	6	0	5	1	0	0	0	0	0	0	0	73
14:30		0	59	8	1	6	0	0	0	0	0	0	0	0	74
14:45		0	55	9	0	3	0	0	0	0	0	0	0	0	67
15:00		0	81	9	0	4	0	0	0	0	0	0	0	0	94
15:15		0	130	6	2	3	0	0	0	0	0	0	0	0	141
15:30		0	143	13	4	3	0	0	0	0	0	0	0	0	163
15:45		0	151	10	1	7	0	0	0	0	0	0	0	0	169
16:00		0	84	11	0	4	0	0	0	0	0	0	0	0	99
16:15		0	68	7	0	2	0	0	0	0	0	0	0	0	77
16:30		0	81	9	0	5	0	0	0	0	0	0	0	0	95
16:45		0	76	9	0	4	0	0	0	0	0	0	0	0	89
17:00		0	82	9	1	2	0	0	0	0	0	0	0	0	94
17:15		0	103	8	0	3	0	0	0	0	0	0	0	0	114
17:30		1	108	8	0	3	1	0	0	0	0	0	0	0	121
17:45		1	73	7	0	2	0	0	0	0	0	0	0	0	83
18:00		0	83	8	0	2	0	0	0	0	0	0	0	0	93
18:15		1	64	6	0	1	1	0	0	0	0	0	0	0	73
18:30		0	73	9	0	4	0	0	0	0	0	0	0	0	86
18:45		1	69	10	0	1	0	0	0	0	0	0	0	0	81
19:00		0	51	6	0	1	0	0	0	0	0	0	0	0	58
19:15		0	61	6	0	2	0	0	0	0	0	0	0	0	69
19:30		0	58	8	0	0	0	0	0	0	0	0	0	0	66
19:45		1	60	5	0	1	0	0	0	0	0	0	0	0	67
20:00		0	43	5	0	0	0	0	0	0	0	0	0	0	48
20:15		0	38	3	0	1	0	0	0	0	0	0	0	0	42
20:30		0	38	1	0	1	0	0	0	0	0	0	0	0	40
20:45		0	37	2	0	0	0	0	0	0	0	0	0	0	39
21:00		0	32	3	0	1	0	0	0	0	0	0	0	0	36
21:15		0	29	2	0	1	0	0	0	0	0	0	0	0	32
21:30		0	20	2	0	0	0	0	0	0	0	0	0	0	22
21:45		0	22	1	0	1	0	0	0	0	0	0	0	0	24
22:00		0	13	3	0	1	0	0	0	0	0	0	0	0	17
22:15		0	11	2	0	1	0	0	0	0	0	0	0	0	14
22:30		0	11	2	0	0	0	0	0	0	0	0	0	0	13
22:45		0	10	0	0	0	0	0	0	0	0	0	0	0	10
23:00		0	6	2	0	0	0	0	0	0	0	0	0	0	8
23:15		0	7	1	0	0	0	0	0	0	0	0	0	0	8
23:30		0	4	0	0	0	0	0	0	0	0	0	0	0	4
23:45		0	6	1	0	0	0	0	0	0	0	0	0	0	7
Totals		10	3864	504	15	208	8	0	0	0					4609
% of Totals		0%	84%	11%	0%	5%	0%								1
AM Volumes		2	1178	216	5	101	4	0	0	0	0	0	0	0	3012
% AM		0%	26%	5%	0%	2%	0%								65%
AM Peak Hour		10:45	7:15	7:15	7:30	8:00	7:45								7:15
Volume		2	322	49	3	28	2								395
PM Volumes		8	2686	288	10	107	4	0	0	0	0	0	0	0	3103
% PM		0%	58%	6%	0%	2%	0%								67%
PM Peak Hour		13:30	15:15	15:15	15:00	12:15	12:15								15:15
Volume		2	508	41	7	18	1								572

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	683	15%	532	12%	772	17%	2622	57%

Classification Definitions

1	Motorcycles	4	Buses	7	> =4-Axle Single Units	10	>=6-Axle Single Trailers	13	>=7-Axle Multi-Trailers
2	Passenger Cars	5	2-Axle, 6-Tire Single Units	8	<=4-Axle Single Trailers	11	<=5-Axle Multi-Trailers		
3	2-Axle, 4-Tire Single Units	6	3-Axle Single Units	9	5-Axle Single Trailers	12	6-Axle Multi-Trailers		

Prepared by National Data & Surveying Services
CLASSIFICATION
Blackhawk Rd E/O Still Creek Rd

Day: Tuesday-Thursday
Date: 3/28/2017 - 3/30/2017

City: Danville
Project #: CA17_7204_001w

West Bound

Time		# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
0:00	AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
0:15		0	2	0	0	0	0	0	0	0	0	0	0	0	2
0:30		0	0	0	0	0	0	0	0	0	0	0	0	0	0
0:45		0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00		0	2	1	0	0	0	0	0	0	0	0	0	0	3
1:15		0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:30		0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45		0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00		0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15		0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:30		0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45		0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00		0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15		0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30		0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45		0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00		0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15		0	3	0	0	0	0	0	0	0	0	0	0	0	3
4:30		0	2	1	0	0	0	0	0	0	0	0	0	0	3
4:45		0	4	0	0	0	0	0	0	0	0	0	0	0	4
5:00		0	7	0	0	0	0	0	0	0	0	0	0	0	7
5:15		0	7	1	0	1	0	0	0	0	0	0	0	0	9
5:30		0	8	0	0	1	0	0	0	0	0	0	0	0	9
5:45		0	9	1	0	0	0	0	0	0	0	0	0	0	10
6:00		0	21	2	0	1	0	0	0	0	0	0	0	0	24
6:15		0	26	3	0	1	0	0	0	0	0	0	0	0	30
6:30		0	37	3	0	2	0	0	0	0	0	0	0	0	42
6:45		0	58	7	0	2	0	0	0	0	0	0	0	0	67
7:00		0	150	9	0	3	0	0	0	0	0	0	0	0	162
7:15		0	117	7	0	2	0	0	0	0	0	0	0	0	126
7:30		0	95	10	4	6	0	0	0	0	0	0	0	0	115
7:45		0	153	12	3	7	0	0	0	0	0	0	0	0	175
8:00		0	115	10	1	2	1	0	1	0	0	1	0	0	131
8:15		0	100	8	1	5	0	0	0	0	0	0	0	0	114
8:30		0	58	8	1	5	0	0	0	0	0	0	0	0	72
8:45		0	60	8	0	7	0	0	0	0	0	0	0	0	75
9:00		0	54	8	0	4	0	0	0	0	0	0	0	0	66
9:15		0	47	7	0	4	0	0	0	0	0	0	0	0	58
9:30		0	40	8	0	5	1	0	0	0	0	0	0	0	54
9:45		0	44	7	0	6	0	0	0	0	0	0	0	0	57
10:00		0	46	9	0	6	0	0	0	0	0	0	0	0	61
10:15		1	58	7	0	4	0	0	0	0	0	0	0	0	70
10:30		0	49	7	0	6	0	0	0	0	0	0	0	0	62
10:45		0	44	13	0	3	0	0	0	0	0	0	0	0	60
11:00		0	44	5	0	5	0	0	0	0	0	0	0	0	54
11:15		0	47	9	0	5	0	0	0	0	0	0	0	0	61
11:30		0	46	10	0	6	0	0	0	0	0	0	0	0	62
11:45		0	48	8	0	4	0	0	0	0	0	0	0	0	60
12:00	PM	0	55	10	0	4	1	0	0	0	0	0	0	0	70
12:15		1	51	7	0	4	0	0	0	0	0	0	0	0	63
12:30		0	58	7	0	4	0	0	0	0	0	0	0	0	69
12:45		1	54	10	0	5	0	0	0	0	0	0	0	0	70
13:00		0	55	6	0	3	0	0	0	0	0	0	0	0	64
13:15		0	60	11	0	4	0	0	0	0	0	0	0	0	75
13:30		0	59	10	0	4	0	0	0	0	0	0	0	0	73
13:45		0	55	7	0	4	0	0	0	0	0	0	0	0	66
14:00		1	55	6	0	3	0	0	0	0	0	0	0	0	65
14:15		0	60	6	1	6	0	0	0	0	0	0	0	0	73
14:30		0	76	9	0	8	0	0	0	0	0	0	0	0	93
14:45		0	78	12	1	9	0	0	0	0	0	0	0	0	100
15:00		0	88	13	0	3	0	0	0	0	0	0	0	0	104
15:15		0	101	9	0	7	0	0	0	0	0	0	0	0	117
15:30		1	99	13	1	9	0	0	0	0	0	0	0	0	123
15:45		0	79	15	2	10	1	0	0	0	0	0	0	0	107
16:00		2	85	20	0	9	0	0	0	0	0	0	0	0	116
16:15		1	100	17	0	7	0	0	0	0	0	0	0	0	125
16:30		1	98	18	0	9	0	0	0	0	0	0	0	0	126
16:45		1	101	15	1	9	0	0	0	0	0	0	0	0	127
17:00		1	112	12	0	8	0	0	0	0	0	0	0	0	133
17:15		0	110	12	0	6	0	0	0	0	0	0	0	0	128
17:30		1	104	14	0	4	0	0	0	0	0	0	0	0	123
17:45		0	103	13	0	8	0	0	0	0	0	0	0	0	124
18:00		0	75	10	0	4	0	0	0	0	0	0	0	0	89
18:15		1	83	8	0	5	0	0	0	0	0	0	0	0	97
18:30		0	65	4	0	5	0	0	0	0	0	0	0	0	74
18:45		0	70	5	0	2	0	0	0	0	0	0	0	0	77
19:00		0	59	6	0	4	0	0	0	0	0	0	0	0	69
19:15		1	83	8	0	2	0	0	0	0	0	0	0	0	94
19:30		0	40	5	0	1	0	0	0	0	0	0	0	0	46
19:45		0	36	4	0	2	0	0	0	0	0	0	0	0	42
20:00		0	28	2	0	1	0	0	0	0	0	0	0	0	31
20:15		0	23	0	0	1	0	0	0	0	0	0	0	0	24
20:30		0	27	0	0	2	0	0	0	0	0	0	0	0	29
20:45		0	46	2	0	1	0	0	0	0	0	0	0	0	49
21:00		0	21	2	0	2	0	0	0	0	0	0	0	0	25
21:15		0	25	1	0	0	0	0	0	0	0	0	0	0	26
21:30		0	18	2	0	0	0	0	0	0	0	0	0	0	20
21:45		0	13	2	0	2	0	0	0	0	0	0	0	0	17
22:00		0	15	1	0	1	0	0	0	0	0	0	0	0	17
22:15		0	7	2	0	0	0	0	0	0	0	0	0	0	9
22:30		0	7	0	0	0	0	0	0	0	0	0	0	0	7
22:45		0	5	1	0	0	0	0	0	0	0	0	0	0	6
23:00		0	4	1	0	0	0	0	0	0	0	0	0	0	5
23:15		0	4	0	0	0	0	0	0	0	0	0	0	0	4
23:30		0	2	0	0	0	0	0	0	0	0	0	0	0	2
23:45		0	3	0	0	0	0	0	0	0	0	0	0	0	3
Totals		14	4261	527	16	285	4		1			1			5109
% of Totals		0%	83%	10%	0%	6%	0%		0%			0%			1
AM Volumes		1	1606	189	10	103	2	0	1	0	0	1	0	0	1913
% AM		0%	31%	4%	0%	2%	0%		0%			0%			37%
AM Peak Hour		9:30	7:00	7:30	7:30	9:45	7:15		7:45			7:15			7:00
Volume		1	515	41	9	22	1		2			1			579
PM Volumes		13	2655	338	6	182	2	0	0	0	0	0	0	0	3196
% PM		0%	52%	7%	0%	4%	0%								63%
PM Peak Hour		15:30	17:00	15:45	15:00	15:15	12:00	14:00	13:15						16:30
Volume		4	429	70	3	36	1	1	1						514

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	970	19%	550	11%	1002	20%	2587	51%

Classification Definitions

1	Motorcycles	4	Buses	7	> =4-Axle Single Units	10	>=6-Axle Single Trailers	13	>=7-Axle Multi-Trailers
2	Passenger Cars	5	2-Axle, 6-Tire Single Units	8	<=4-Axle Single Trailers	11	<=5-Axle Multi-Trailers		
3	2-Axle, 4-Tire Single Units	6	3-Axle Single Units	9	5-Axle Single Trailers	12	6-Axle Multi-Trailers		

Prepared by National Data & Surveying Services
CLASSIFICATION
Blackhawk Rd E/O Still Creek Rd

Day: Tuesday-Thursday
Date: 3/28/2017 - 3/30/2017

City: Danville
Project #: CA17_7204_001

Summary

Time		# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
0:00	AM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
0:15		0	4	0	0	0	0	0	0	0	0	0	0	0	4
0:30		0	3	0	0	0	0	0	0	0	0	0	0	0	3
0:45		0	4	1	0	0	0	0	0	0	0	0	0	0	5
1:00		0	3	1	0	0	0	0	0	0	0	0	0	0	4
1:15		0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:30		0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:45		0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00		0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:15		0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:30		0	0	0	0	1	0	0	0	0	0	0	0	0	1
2:45		0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00		0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:15		0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:30		0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45		0	1	1	0	0	0	0	0	0	0	0	0	0	2
4:00		0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:15		0	3	0	0	0	0	0	0	0	0	0	0	0	3
4:30		0	5	1	0	0	0	0	0	0	0	0	0	0	6
4:45		0	7	1	0	0	0	0	0	0	0	0	0	0	8
5:00		0	9	0	0	0	0	0	0	0	0	0	0	0	9
5:15		0	9	1	0	2	0	0	0	0	0	0	0	0	12
5:30		0	12	1	0	1	0	0	0	0	0	0	0	0	14
5:45		0	15	3	0	0	0	0	0	0	0	0	0	0	18
6:00		0	25	3	0	1	0	0	0	0	0	0	0	0	29
6:15		0	38	6	1	2	0	0	0	0	0	0	0	0	47
6:30		0	54	7	0	4	0	0	0	0	0	0	0	0	65
6:45		0	77	14	0	5	0	0	0	0	0	0	0	0	96
7:00		0	191	16	1	7	0	0	0	0	0	0	0	0	215
7:15		0	204	15	0	6	0	0	0	0	0	0	0	0	225
7:30		0	181	21	4	11	0	0	0	0	0	0	0	0	217
7:45		0	222	25	3	13	1	0	0	0	0	0	0	0	264
8:00		0	191	23	2	10	1	0	1	0	0	1	0	0	229
8:15		0	158	18	2	12	1	0	0	0	0	0	0	0	191
8:30		0	134	19	1	11	0	0	0	0	0	0	0	0	165
8:45		0	121	21	0	14	0	0	0	0	0	0	0	0	156
9:00		0	100	16	0	9	0	0	0	0	0	0	0	0	125
9:15		0	95	16	0	9	0	0	0	0	0	0	0	0	120
9:30		0	86	16	0	9	1	0	0	0	0	0	0	0	112
9:45		0	84	18	0	10	0	0	0	0	0	0	0	0	112
10:00		0	86	16	1	9	0	0	0	0	0	0	0	0	112
10:15		1	97	16	1	9	0	0	0	0	0	0	0	0	124
10:30		0	92	16	0	12	0	0	0	0	0	0	0	0	120
10:45		0	88	20	1	9	0	0	0	0	0	0	0	0	118
11:00		0	84	14	1	9	0	0	0	0	0	0	0	0	108
11:15		0	96	18	0	8	0	0	0	0	0	0	0	0	122
11:30		1	90	18	1	8	0	0	0	0	0	0	0	0	118
11:45		0	93	17	0	7	0	0	0	0	0	0	0	0	117
12:00	PM	0	107	14	0	7	1	0	0	0	0	0	0	0	129
12:15		1	99	13	0	9	0	0	0	0	0	0	0	0	122
12:30		0	107	15	0	8	0	0	0	0	0	0	0	0	130
12:45		1	124	19	0	10	0	0	0	0	0	0	0	0	154
13:00		1	107	13	1	7	0	0	0	0	0	0	0	0	129
13:15		0	109	16	1	9	0	0	0	0	0	0	0	0	135
13:30		0	103	19	1	6	0	0	0	0	0	0	0	0	129
13:45		1	101	13	0	10	0	0	0	0	0	0	0	0	125
14:00		1	108	17	1	7	0	0	0	0	0	0	0	0	134
14:15		1	116	11	1	11	1	0	0	0	0	0	0	0	141
14:30		1	136	18	1	14	1	1	0	0	0	0	0	0	172
14:45		0	138	21	1	13	0	0	0	0	0	0	0	0	173
15:00		0	166	25	0	9	0	0	0	0	0	0	0	0	200
15:15		0	233	17	2	9	0	0	0	0	0	0	0	0	261
15:30		2	245	24	5	13	0	0	0	0	0	0	0	0	289
15:45		0	226	27	2	16	1	0	0	0	0	0	0	0	272
16:00		2	166	32	0	12	0	0	0	0	0	0	0	0	212
16:15		1	167	23	0	9	0	0	0	0	0	0	0	0	200
16:30		1	179	28	0	14	1	0	0	0	0	0	0	0	223
16:45		1	177	24	1	14	1	0	0	0	0	0	0	0	218
17:00		1	199	21	1	10	0	0	0	0	0	0	0	0	232
17:15		0	220	23	0	9	0	0	0	0	0	0	0	0	252
17:30		1	198	21	0	8	0	0	0	0	0	0	0	0	228
17:45		1	187	19	0	11	0	0	0	0	0	0	0	0	218
18:00		0	161	17	0	6	0	0	0	0	0	0	0	0	184
18:15		1	157	16	0	7	0	0	0	0	0	0	0	0	181
18:30		0	144	12	0	8	0	0	0	0	0	0	0	0	164
18:45		0	145	14	0	4	0	0	0	0	0	0	0	0	163
19:00		0	116	14	0	5	0	0	0	0	0	0	0	0	135
19:15		1	153	14	0	4	0	0	0	0	0	0	0	0	172
19:30		0	93	10	0	2	0	0	0	0	0	0	0	0	105
19:45		1	89	9	0	4	0	0	0	0	0	0	0	0	103
20:00		0	75	5	0	1	0	0	0	0	0	0	0	0	81
20:15		0	66	4	0	2	0	0	0	0	0	0	0	0	72
20:30		0	68	2	0	3	0	0	0	0	0	0	0	0	73
20:45		0	101	6	0	2	0	0	0	0	0	0	0	0	109
21:00		0	66	4	0	2	0	0	0	0	0	0	0	0	72
21:15		0	59	3	0	2	0	0	0	0	0	0	0	0	64
21:30		0	42	3	0	1	0	0	0	0	0	0	0	0	46
21:45		0	34	3	0	2	0	0	0	0	0	0	0	0	39
22:00		0	31	2	0	1	0	0	0	0	0	0	0	0	34
22:15		0	18	4	0	1	0	0	0	0	0	0	0	0	23
22:30		0	17	1	0	0	0	0	0	0	0	0	0	0	18
22:45		0	15	2	0	0	0	0	0	0	0	0	0	0	17
23:00		0	13	2	0	0	0	0	0	0	0	0	0	0	15
23:15		0	9	1	0	0	0	0	0	0	0	0	0	0	10
23:30		0	6	0	0	0	0	0	0	0	0	0	0	0	6
23:45		0	8	1	0	0	0	0	0	0	0	0	0	0	9
Totals		22	8179	1022	37	510	10	1	1			1			9783
% of Totals		0%	84%	10%	0%	5%	0%	0%	0%			0%			1
AM Volumes		2	2775	400	19	208	4	0	1	0	0	1	0	0	3410
% AM		0%	28%	4%	0%	2%	0%		0%			0%			35%
AM Peak Hour		11:15	7:00	7:30	7:30	8:00	7:45		7:45			7:15			7:15
Volume		2	798	86	11	46	3		2			1			937
PM Volumes		20	5404	622	18	302	6	1	0	0	0	0	0	0	6373
% PM		0%	55%	6%	0%	3%	0%	0%							65%
PM Peak Hour		16:00	15:00	15:45	15:00	15:45	13:45	13:45	13:15						15:15
Volume		5	869	110	10	51	2	1	1						1033

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	1662	17%	1053	11%	1783	18%	5285	54%

Classification Definitions

1	Motorcycles	4	Buses	7	> =4-Axle Single Units	10	>=6-Axle Single Trailers	13	>=7-Axle Multi-Trailers
2	Passenger Cars	5	2-Axle, 6-Tire Single Units	8	<=4-Axle Single Trailers	11	<=5-Axle Multi-Trailers		
3	2-Axle, 4-Tire Single Units	6	3-Axle Single Units	9	5-Axle Single Trailers	12	6-Axle Multi-Trailers		

Prepared by National Data & Surveying Services
CLASSIFICATION
Blackhawk Rd E/O Still Creek Rd

Day: Tuesday-Thursday
Date: 3/28/2017 - 3/30/2017

City: Danville
Project #: CA17_7204_001e

East Bound

Time		# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
0:00	AM	0	10	0	0	0	0	0	0	0	0	0	0	0	10
1:00		0	3	0	0	0	0	0	0	0	0	0	0	0	3
2:00		0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00		0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00		0	7	1	0	0	0	0	0	0	0	0	0	0	8
5:00		0	15	4	0	1	0	0	0	0	0	0	0	0	20
6:00		0	52	15	1	5	0	0	0	0	0	0	0	0	73
7:00		0	283	39	2	20	0	0	0	0	0	0	0	0	344
8:00		0	271	46	2	27	1	0	0	0	0	0	0	0	347
9:00		0	181	37	0	18	1	0	0	0	0	0	0	0	237
10:00		0	166	32	2	20	0	0	0	0	0	0	0	0	220
11:00		1	177	36	1	12	1	0	0	0	0	0	0	0	228
12:00	PM	0	219	27	1	17	0	0	0	0	0	0	0	0	264
13:00		1	192	28	2	16	0	0	0	0	0	0	0	0	239
14:00		1	229	33	2	18	1	1	0	0	0	0	0	0	285
15:00		1	503	42	7	17	0	0	0	0	0	0	0	0	570
16:00		0	306	38	0	15	1	0	0	0	0	0	0	0	360
17:00		1	375	34	1	13	0	0	0	0	0	0	0	0	424
18:00		1	314	32	0	9	0	0	0	0	0	0	0	0	356
19:00		0	234	24	0	6	0	0	0	0	0	0	0	0	264
20:00		0	187	13	0	3	0	0	0	0	0	0	0	0	203
21:00		0	122	7	0	3	0	0	0	0	0	0	0	0	132
22:00		0	47	5	0	1	0	0	0	0	0	0	0	0	53
23:00		0	24	3	0	0	0	0	0	0	0	0	0	0	27
Totals		6	3919	496	21	221	5	1							4669
% of Totals		0%	84%	11%	0%	5%	0%	0%							1
AM Volumes		1	1167	210	8	103	3	0	0	0	0	0	0	0	1492
% AM		0%	25%	4%	0%	2%	0%								32%
AM Peak Hour		11:00	7:00	8:00	7:00	8:00	8:00								8:00
Volume		1	283	46	2	27	1								347
PM Volumes		5	2752	286	13	118	2	1	0	0	0	0	0	0	3177
% PM		0%	59%	6%	0%	3%	0%	0%							68%
PM Peak Hour		13:00	15:00	15:00	15:00	14:00	14:00	14:00							15:00
Volume		1	503	42	7	18	1	1							570

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	691	15%	503	11%	784	17%	2691	58%

Classification Definitions

1	Motorcycles	4	Buses	7	> =4-Axle Single Units	10	>=6-Axle Single Trailers	13	>=7-Axle Multi-Trailers
2	Passenger Cars	5	2-Axle, 6-Tire Single Units	8	<=4-Axle Single Trailers	11	<=5-Axle Multi-Trailers		
3	2-Axle, 4-Tire Single Units	6	3-Axle Single Units	9	5-Axle Single Trailers	12	6-Axle Multi-Trailers		

Prepared by National Data & Surveying Services
CLASSIFICATION
Blackhawk Rd E/O Still Creek Rd

Day: Tuesday-Thursday
Date: 3/28/2017 - 3/30/2017

City: Danville
Project #: CA17_7204_001w

West Bound

Time		# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
0:00	AM	0	5	0	0	0	0	0	0	0	0	0	0	0	5
1:00		0	3	1	0	0	0	0	0	0	0	0	0	0	4
2:00		0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00		0	2	1	0	0	0	0	0	0	0	0	0	0	3
4:00		0	9	2	0	0	0	0	0	0	0	0	0	0	11
5:00		0	31	2	0	2	0	0	0	0	0	0	0	0	35
6:00		0	142	15	0	6	0	0	0	0	0	0	0	0	163
7:00		0	515	38	7	18	0	0	0	0	0	0	0	0	578
8:00		0	332	34	3	19	1	0	1	0	0	1	0	0	391
9:00		0	185	30	1	18	1	0	0	0	0	0	0	0	235
10:00		1	198	35	1	19	0	0	0	0	0	0	0	0	254
11:00		0	186	31	1	19	0	0	0	0	0	0	0	0	237
12:00	PM	2	218	34	0	17	1	0	0	0	0	0	0	0	272
13:00		1	229	33	0	16	0	0	0	0	0	0	0	0	279
14:00		1	269	33	2	26	1	1	1	0	0	0	0	0	334
15:00		2	366	51	3	30	1	0	0	0	0	0	0	0	453
16:00		4	383	69	2	34	0	0	0	0	0	0	0	0	492
17:00		1	429	50	0	26	0	0	0	0	0	0	0	0	506
18:00		1	293	27	0	16	0	0	0	0	0	0	0	0	337
19:00		1	218	22	0	9	0	0	0	0	0	0	0	0	250
20:00		0	123	5	0	4	0	0	0	0	0	0	0	0	132
21:00		0	78	6	0	4	0	0	0	0	0	0	0	0	88
22:00		0	34	5	0	1	0	0	0	0	0	0	0	0	40
23:00		0	13	1	0	0	0	0	0	0	0	0	0	0	14
Totals		14	4262	525	20	284	5	1	2			1			5114
% of Totals		0%	83%	10%	0%	6%	0%	0%	0%			0%			100%
AM Volumes		1	1609	189	13	101	2	0	1	0	0	1	0	0	1917
% AM		0%	31%	4%	0%	2%	0%		0%			0%			37%
AM Peak Hour		10:00	7:00	7:00	7:00	8:00	8:00		8:00			8:00			7:00
Volume		1	515	38	7	19	1		1			1			578
PM Volumes		13	2653	336	7	183	3	1	1	0	0	0	0	0	3197
% PM		0%	52%	7%	0%	4%	0%	0%	0%						63%
PM Peak Hour		16:00	17:00	16:00	15:00	16:00	12:00	14:00	14:00						17:00
Volume		4	429	69	3	34	1	1	1						506

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	969	19%	551	11%	998	20%	2596	51%

Classification Definitions

1	Motorcycles	4	Buses	7	> =4-Axle Single Units	10	>=6-Axle Single Trailers	13	>=7-Axle Multi-Trailers
2	Passenger Cars	5	2-Axle, 6-Tire Single Units	8	<=4-Axle Single Trailers	11	<=5-Axle Multi-Trailers		
3	2-Axle, 4-Tire Single Units	6	3-Axle Single Units	9	5-Axle Single Trailers	12	6-Axle Multi-Trailers		

Prepared by National Data & Surveying Services
CLASSIFICATION
Blackhawk Rd E/O Still Creek Rd

Day: Tuesday-Thursday
Date: 3/28/2017 - 3/30/2017

City: Danville
Project #: CA17_7204_001

Summary

Time		# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
0:00	AM	0	16	1	0	0	0	0	0	0	0	0	0	0	17
1:00		0	6	1	0	0	0	0	0	0	0	0	0	0	7
2:00		0	2	0	0	1	0	0	0	0	0	0	0	0	3
3:00		0	3	1	0	0	0	0	0	0	0	0	0	0	4
4:00		0	16	3	0	0	0	0	0	0	0	0	0	0	19
5:00		0	46	5	0	3	0	0	0	0	0	0	0	0	54
6:00		0	194	30	1	12	0	0	0	0	0	0	0	0	237
7:00		0	798	77	9	37	1	0	0	0	0	0	0	0	922
8:00		0	603	80	5	46	2	0	1	0	0	1	0	0	738
9:00		1	365	66	1	36	1	0	0	0	0	0	0	0	470
10:00		1	363	68	2	39	1	0	0	0	0	0	0	0	474
11:00		1	362	67	2	31	1	0	0	0	0	0	0	0	464
12:00	PM	2	438	60	1	34	1	0	0	0	0	0	0	0	536
13:00		2	420	61	2	32	1	0	0	0	0	0	0	0	518
14:00		2	498	66	4	44	2	1	1	0	0	0	0	0	618
15:00		2	869	93	10	47	1	0	0	0	0	0	0	0	1022
16:00		5	689	107	2	49	1	0	0	0	0	0	0	0	853
17:00		3	804	84	1	38	0	0	0	0	0	0	0	0	930
18:00		2	608	59	0	26	0	0	0	0	0	0	0	0	695
19:00		1	452	47	0	15	0	0	0	0	0	0	0	0	515
20:00		0	310	17	0	8	0	0	0	0	0	0	0	0	335
21:00		0	200	13	0	7	0	0	0	0	0	0	0	0	220
22:00		0	81	10	0	2	0	0	0	0	0	0	0	0	93
23:00		0	37	4	0	0	0	0	0	0	0	0	0	0	41
Totals		22	8180	1020	40	507	12	1	2			1			9785
% of Totals		0%	84%	10%	0%	5%	0%	0%	0%			0%			100%
AM Volumes		3	2774	399	20	205	6	0	1	0	0	1	0	0	3409
% AM		0%	28%	4%	0%	2%	0%		0%			0%			35%
AM Peak Hour		9:00	7:00	8:00	7:00	8:00	8:00		8:00			8:00			7:00
Volume		1	798	80	9	46	2		1			1			922
PM Volumes		19	5406	621	20	302	6	1	1	0	0	0	0	0	6376
% PM		0%	55%	6%	0%	3%	0%	0%	0%						65%
PM Peak Hour		16:00	15:00	16:00	15:00	16:00	14:00	14:00	14:00						15:00
Volume		5	869	107	10	49	2	1	1						1022

Directional Peak Periods	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
All Classes	Volume	%	Volume	%	Volume	%	Volume	%
	1660	17%	1054	11%	1783	18%	5288	54%

Classification Definitions

1	Motorcycles	4	Buses	7	> =4-Axle Single Units	10	>=6-Axle Single Trailers	13	>=7-Axle Multi-Trailers
2	Passenger Cars	5	2-Axle, 6-Tire Single Units	8	<=4-Axle Single Trailers	11	<=5-Axle Multi-Trailers		
3	2-Axle, 4-Tire Single Units	6	3-Axle Single Units	9	5-Axle Single Trailers	12	6-Axle Multi-Trailers		

Prepared by National Data & Surveying Services
VOLUME
Blackhawk Rd E/O Still Creek Rd
Day: Tuesday-Thursday
Date: 3/28/2017 - 3/30/2017

City: Danville
Project #: CA17_7204_001

DAILY TOTALS	EB	WB	Total
	4674	5120	9794

AM Period	EB		WB		TOTAL		PM Period	EB		WB		TOTAL	
0:00	3		1		4		12:00	59		70		129	
0:15	2		2		4		12:15	60		63		123	
0:30	3		0		3		12:30	61		69		130	
0:45	3	11	2	5	5	16	12:45	84	264	70	272	154	536
1:00	1		2		3		13:00	65		64		129	
1:15	1		1		2		13:15	61		75		136	
1:30	0		0				13:30	56		73		129	
1:45	1	3	1	4	2	7	13:45	59	241	67	279	126	520
2:00	0		0				14:00	68		66		134	
2:15	1		1		2		14:15	66		74		140	
2:30	0		0				14:30	76		94		170	
2:45	0	1	0	1		2	14:45	74	284	99	333	173	617
3:00	0		0				15:00	96		105		201	
3:15	0		1		1		15:15	144		118		262	
3:30	0		0				15:30	165		123		288	
3:45	1	1	1	2	2	3	15:45	165	570	107	453	272	1023
4:00	1		0		1		16:00	96		116		212	
4:15	1		3		4		16:15	76		124		200	
4:30	3		4		7		16:30	98		126		224	
4:45	3	8	5	12	8	20	16:45	91	361	128	494	219	855
5:00	2		7		9		17:00	100		132		232	
5:15	3		9		12		17:15	124		128		252	
5:30	6		9		15		17:30	107		122		229	
5:45	8	19	10	35	18	54	17:45	94	425	124	506	218	931
6:00	5		24		29		18:00	95		89		184	
6:15	17		30		47		18:15	85		97		182	
6:30	22		42		64		18:30	90		75		165	
6:45	29	73	68	164	97	237	18:45	87	357	77	338	164	695
7:00	52		162		214		19:00	66		70		136	
7:15	100		126		226		19:15	78		94		172	
7:30	102		115		217		19:30	60		46		106	
7:45	89	343	176	579	265	922	19:45	61	265	42	252	103	517
8:00	98		131		229		20:00	51		30		81	
8:15	75		114		189		20:15	49		24		73	
8:30	93		72		165		20:30	45		29		74	
8:45	81	347	76	393	157	740	20:45	60	205	49	132	109	337
9:00	60		65		125		21:00	47		24		71	
9:15	62		58		120		21:15	37		27		64	
9:30	59		53		112		21:30	26		20		46	
9:45	56	237	58	234	114	471	21:45	22	132	17	88	39	220
10:00	51		61		112		22:00	18		17		35	
10:15	53		70		123		22:15	13		9		22	
10:30	58		62		120		22:30	11		7		18	
10:45	58	220	60	253	118	473	22:45	11	53	7	40	18	93
11:00	53		54		107		23:00	10		5		15	
11:15	61		61		122		23:15	6		4		10	
11:30	56		62		118		23:30	5		2		7	
11:45	57	227	60	237	117	464	23:45	6	27	3	14	9	41
TOTALS		1490		1919		3409	TOTALS		3184		3201		6385
SPLIT %		43.7%		56.3%		34.8%	SPLIT %		49.9%		50.1%		65.2%

DAILY TOTALS

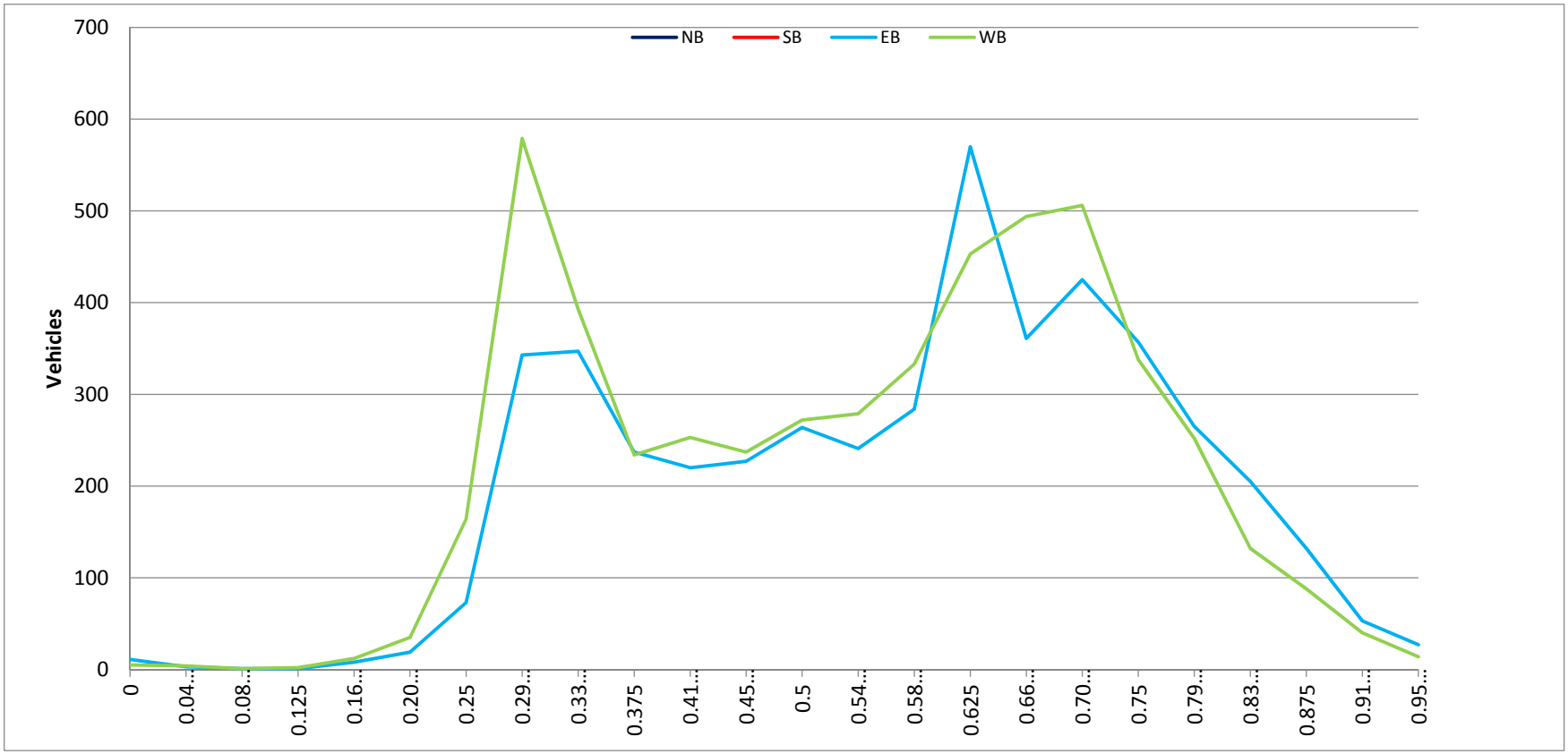
DAILY TOTALS	EB	WB	Total
	9970	9267	19237

AM Peak Hour	7:15	7:00	7:15	PM Peak Hour	15:00	16:30	15:15
AM Pk Volume	389	579	937	PM Pk Volume	570	514	1034
Pk Hr Factor	0.953	0.822	0.884	Pk Hr Factor	0.864	0.973	0.898
7 - 9 Volume	690	972	1662	4 - 6 Volume	786	1000	1786
7 - 9 Peak Hour	7:15	7:00	7:15	4 - 6 Peak Hour	17:00	16:30	16:45
7 - 9 Pk Volume	389	579	937	4 - 6 Pk Volume	425	514	932
Pk Hr Factor	0.953	0.822	0.884	Pk Hr Factor	0.857	0.973	0.925

Prepared by NDS/ATD

Project #: CA17_7204_001 City: Danville

Location: Blackhawk Rd E/O Still Creek Rd Date: 3/28/2017 - 3/30/2017



Origin-Destination Survey

Prepared by National Data and Surveying Services

Origin Destiantion Study

Date: 5/2/2017 **Day: Tuesday**

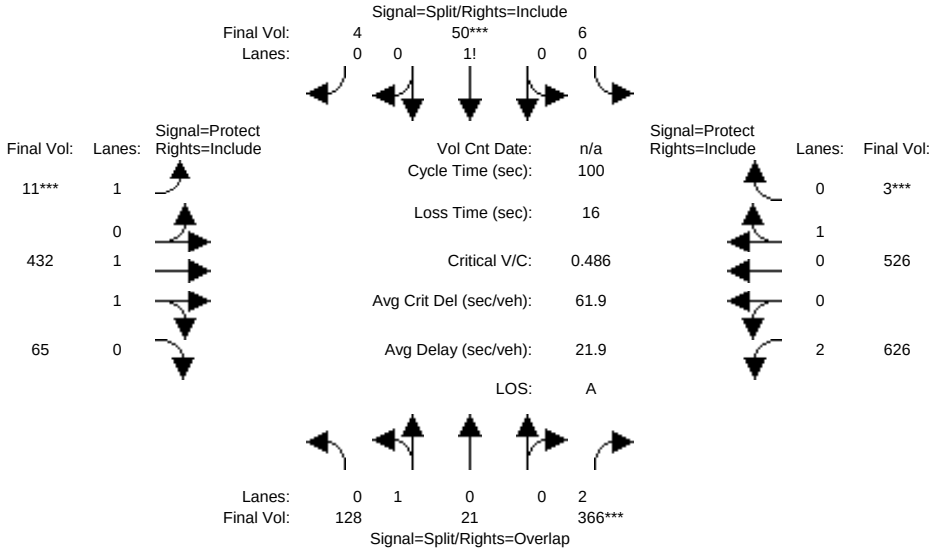
From:	**Calle Arroyo NB**	**Ave Nueva NB**	**Avenida Diablo EB**	**Ave Nueva NB**
To:	**Ave Nueva SB**	**Calle Arroyo SB**	**Ave Nueva SB**	**Avenida Diablo WB**
		AM		
7:00	0	0	0	0
7:15	0	0	0	1
7:30	0	0	0	1
7:45	2	0	3	0
8:00	0	0	1	2
8:15	0	0	3	1
8:30	0	0	0	1
8:45	0	0	1	0
		Noon		
14:00	0	0	1	1
14:15	0	0	0	3
14:30	0	0	2	2
14:45	1	1	0	1
15:00	0	0	1	0
15:15	0	0	4	1
15:30	0	1	5	4
15:45	1	1	0	1
		PM		
16:00	0	0	1	0
16:15	0	0	1	1
16:30	0	0	0	1
16:45	0	0	1	1
17:00	0	0	0	1
17:15	0	0	2	2
17:30	0	0	5	2
17:45	0	0	0	0
Total	**4**	**3**	**31**	**27**

Appendix B LEVEL OF SERVICE WORKSHEETS: EXISTING CONDITIONS

Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Existing AM

Intersection #1: Daiblo Rd and El Cerro Blvd



Street Name:	Diablo Road						El Cerro Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	100	16	554	4	35	3	9	354	53	557	468	3
Growth 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
Initial Bse:	100	16	554	4	35	3	9	354	53	557	468	3
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	100	16	554	4	35	3	9	354	53	557	468	3
User 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
PHF Adj:	0.78	0.78	0.78	0.70	0.70	0.70	0.82	0.82	0.82	0.89	0.89	0.89
PHF Volume:	128	21	710	6	50	4	11	432	65	626	526	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	21	710	6	50	4	11	432	65	626	526	3
RTOR Reduct:	0	0	344	0	0	0	0	0	0	0	0	0
RTOR Vol:	128	21	366	6	50	4	11	432	65	626	526	3
PCE 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
MLF 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
FinalVolume:	128	21	366	6	50	4	11	432	65	626	526	3
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	0.86	0.14	2.00	0.10	0.83	0.07	1.00	1.74	0.26	2.00	0.99	0.01
Final Sat.:	1422	228	3000	157	1375	118	1650	2870	430	3000	1639	11
Capacity Analysis Module:												
Vol/Sat:	0.09	0.09	0.12	0.04	0.04	0.04	0.01	0.15	0.15	0.21	0.32	0.32
Crit Moves:			****		****		****					****
Green/Cycle:	0.18	0.18	0.51	0.10	0.10	0.10	0.07	0.23	0.23	0.32	0.49	0.49
Volume/Cap:	0.49	0.49	0.24	0.36	0.36	0.36	0.10	0.65	0.65	0.65	0.66	0.66
Delay/Veh:	29.3	34.6	10.7	38.0	33.1	39.5	33.5	28.2	35.7	23.4	16.5	101.3
Delay 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
AdjDel/Veh:	29.3	34.6	10.7	38.0	33.1	39.5	33.5	28.2	35.7	23.4	16.5	101.3
DesignQueue:	7	7	5	3	3	3	1	11	11	12	16	16

Note: Queue reported is the number of cars per lane.

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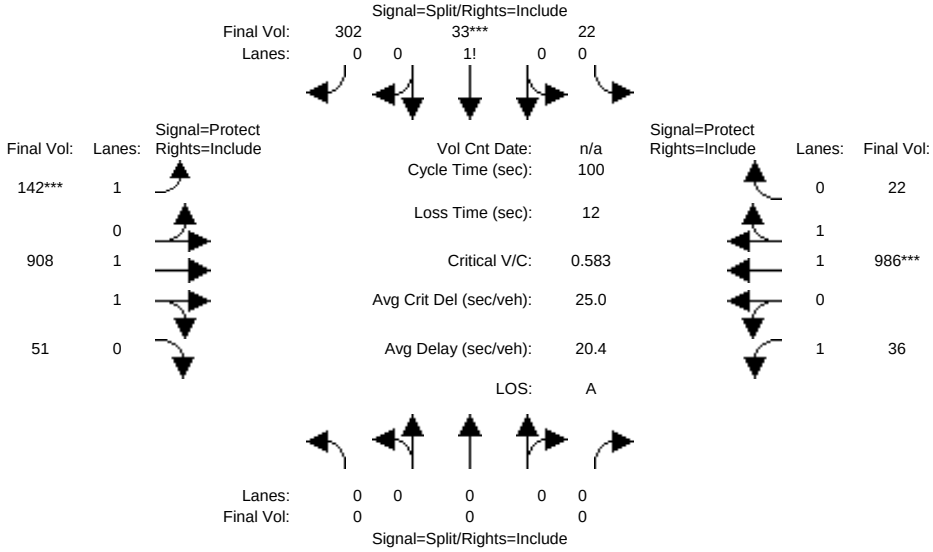
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Existing AM

Intersection #2: Matadera Wy and Diablo Rd



Street Name:	Metadera Way						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	10	15	139	118	754	42	31	848	19
Growth 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
Initial Bse:	0	0	0	10	15	139	118	754	42	31	848	19
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	10	15	139	118	754	42	31	848	19
User 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
PHF Adj:	1.00	1.00	1.00	0.46	0.46	0.46	0.83	0.83	0.83	0.86	0.86	0.86
PHF Volume:	0	0	0	22	33	302	142	908	51	36	986	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	22	33	302	142	908	51	36	986	22
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	22	33	302	142	908	51	36	986	22
PCE 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
MLF 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
FinalVolume:	0	0	0	22	33	302	142	908	51	36	986	22
Saturation Flow Module:												
Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.06	0.09	0.85	1.00	1.89	0.11	1.00	1.96	0.04
Final Sat.:	0	0	0	105	157	1458	1720	3258	182	1720	3365	75
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.21	0.21	0.21	0.08	0.28	0.28	0.02	0.29	0.29
Crit Moves:					****		****				****	
Green/Cycle:	0.00	0.00	0.00	0.31	0.31	0.31	0.12	0.45	0.45	0.11	0.44	0.44
Volume/Cap:	0.00	0.00	0.00	0.66	0.66	0.66	0.66	0.62	0.62	0.18	0.66	0.66
Delay/Veh:	0.0	0.0	0.0	47.5	40.9	25.4	37.2	16.5	24.6	30.9	17.7	41.2
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	47.5	40.9	25.4	37.2	16.5	24.6	30.9	17.7	41.2
DesignQueue:	0	0	0	14	14	14	7	16	16	2	17	17

Note: Queue reported is the number of cars per lane.

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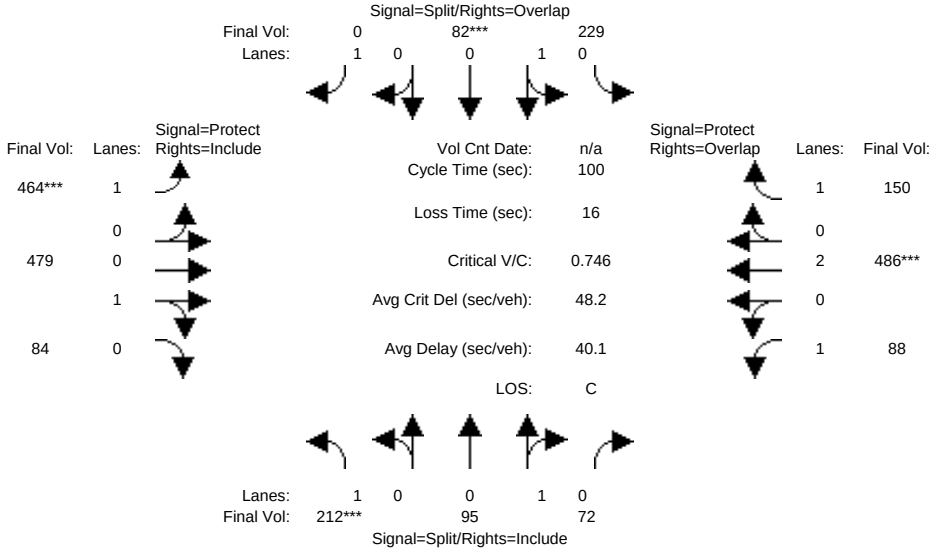
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Existing AM

Intersection #3: Green Valley Rd and Diablo Rd



Street Name:	Green Valeey Road						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	121	54	41	190	68	354	348	359	63	70	389	303
Growth 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
Initial Bse:	121	54	41	190	68	354	348	359	63	70	389	303
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	121	54	41	190	68	354	348	359	63	70	389	303
User 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
PHF Adj:	0.57	0.57	0.57	0.83	0.83	0.83	0.75	0.75	0.75	0.80	0.80	0.80
PHF Volume:	212	95	72	229	82	427	464	479	84	88	486	379
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	212	95	72	229	82	427	464	479	84	88	486	379
RTOR Reduct:	0	0	0	0	0	427	0	0	0	0	0	229
RTOR Vol:	212	95	72	229	82	0	464	479	84	88	486	150
PCE 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
MLF 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
FinalVolume:	212	95	72	229	82	0	464	479	84	88	486	150
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.57	0.43	0.74	0.26	1.00	1.00	0.85	0.15	1.00	2.00	1.00
Final Sat.:	1650	938	712	1215	435	1650	1650	1404	246	1650	3300	1650
Capacity Analysis Module:												
Vol/Sat:	0.13	0.10	0.10	0.19	0.19	0.00	0.28	0.34	0.34	0.05	0.15	0.09
Crit Moves:	****				****		****				****	
Green/Cycle:	0.14	0.14	0.14	0.21	0.21	0.00	0.32	0.40	0.40	0.08	0.17	0.38
Volume/Cap:	0.89	0.70	0.70	0.89	0.89	0.00	0.89	0.85	0.85	0.64	0.89	0.24
Delay/Veh:	53.6	40.9	43.4	49.6	69.8	0.0	36.9	29.3	52.6	41.1	42.9	16.4
Delay 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
AdjDel/Veh:	53.6	40.9	43.4	49.6	69.8	0.0	36.9	29.3	52.6	41.1	42.9	16.4
DesignQueue:	10	8	8	14	14	0	19	20	20	5	12	5

Note: Queue reported is the number of cars per lane.

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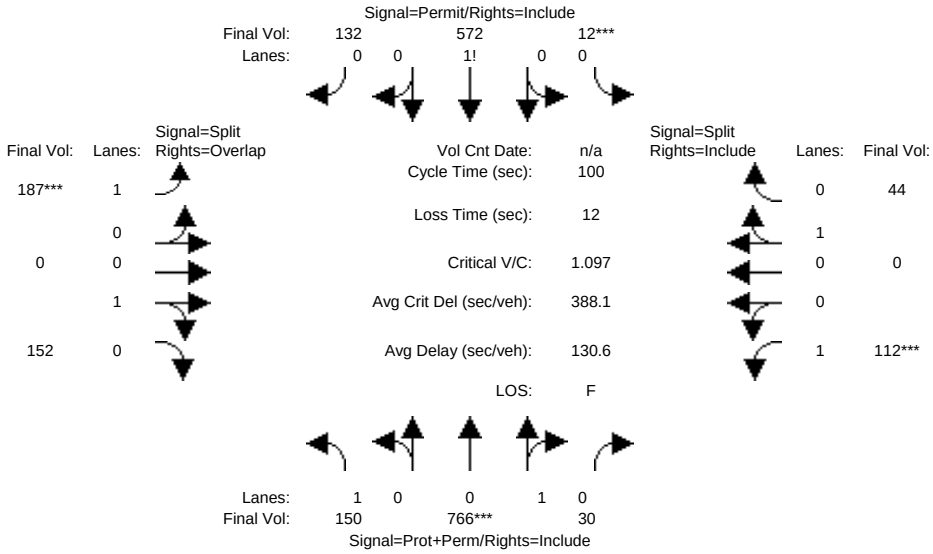
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Existing AM

Intersection #4: Green Valley Rd and Blemer Rd/Cameo Dr



Street Name:	Green Valley Road						Blemer Road/Cameo Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	114	582	23	9	429	99	86	0	70	95	0	37
Growth 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
Initial Bse:	114	582	23	9	429	99	86	0	70	95	0	37
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	114	582	23	9	429	99	86	0	70	95	0	37
User 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
PHF Adj:	0.76	0.76	0.76	0.75	0.75	0.75	0.46	0.46	0.46	0.85	0.85	0.85
PHF Volume:	150	766	30	12	572	132	187	0	152	112	0	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	150	766	30	12	572	132	187	0	152	112	0	44
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	150	766	30	12	572	132	187	0	152	112	0	44
PCE 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
MLF 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
FinalVolume:	150	766	30	12	572	132	187	0	152	112	0	44
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.96	0.04	0.02	0.80	0.18	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	1650	1587	63	28	1318	304	1650	0	1650	1650	0	1650
Capacity Analysis Module:												
Vol/Sat:	0.09	0.48	0.48	0.43	0.43	0.43	0.11	0.00	0.09	0.07	0.00	0.03
Crit Moves:		****		****			****			****		
Green/Cycle:	0.12	0.36	0.36	0.32	0.56	0.56	0.10	0.00	0.22	0.10	0.00	0.10
Volume/Cap:	0.77	1.35	1.35	1.35	0.77	0.77	1.13	0.00	0.42	0.68	0.00	0.26
Delay/Veh:	44.5	265	467.2	642.3	16.5	25.9	144.2	0.0	26.5	40.6	0.0	32.2
Delay 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
AdjDel/Veh:	44.5	265	467.2	642.3	16.5	25.9	144.2	0.0	26.5	40.6	0.0	32.2
DesignQueue:	8	32	32	30	19	19	10	0	7	6	0	2

Note: Queue reported is the number of cars per lane.

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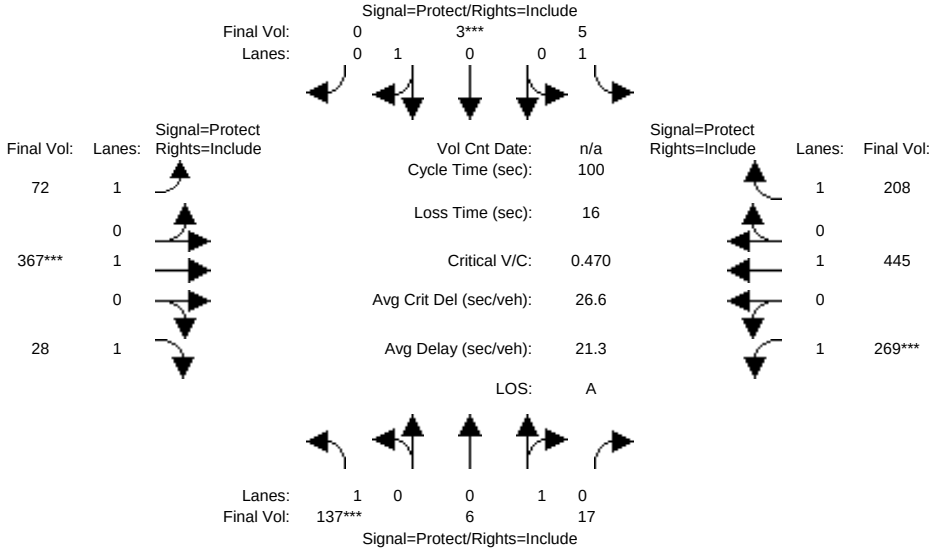
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Existing AM

Intersection #6: Monte Vista H.S. Main and Stone Valeey Rd



Street Name:	Monte Vista H.S. Main Parking Lot						Stone Valley Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	86	4	11	2	1	0	55	279	125	199	329	158
Growth 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
Initial Bse:	86	4	11	2	1	0	55	279	125	199	329	158
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	86	4	11	2	1	0	55	279	125	199	329	158
User 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
PHF Adj:	0.63	0.63	0.63	0.38	0.38	0.38	0.76	0.76	0.76	0.74	0.74	0.74
PHF Volume:	137	6	17	5	3	0	72	367	164	269	445	214
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	137	6	17	5	3	0	72	367	164	269	445	214
RTOR Reduct:	0	0	0	0	0	0	0	0	137	0	0	5
RTOR Vol:	137	6	17	5	3	0	72	367	28	269	445	208
PCE 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
MLF 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
FinalVolume:	137	6	17	5	3	0	72	367	28	269	445	208
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.27	0.73	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1650	440	1210	1650	1650	0	1650	1650	1650	1650	1650	1650
Capacity Analysis Module:												
Vol/Sat:	0.08	0.01	0.01	0.00	0.00	0.00	0.04	0.22	0.02	0.16	0.27	0.13
Crit Moves:	****				****			****		****		
Green/Cycle:	0.13	0.14	0.14	0.10	0.10	0.00	0.13	0.35	0.35	0.26	0.48	0.48
Volume/Cap:	0.63	0.11	0.11	0.03	0.02	0.00	0.35	0.63	0.05	0.63	0.56	0.26
Delay/Veh:	35.8	29.2	29.2	31.6	31.2	0.0	31.2	22.4	16.5	27.5	14.7	11.8
Delay 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
AdjDel/Veh:	35.8	29.2	29.2	31.6	31.2	0.0	31.2	22.4	16.5	27.5	14.7	11.8
DesignQueue:	7	1	1	0	0	0	4	14	1	12	14	6

Note: Queue reported is the number of cars per lane.

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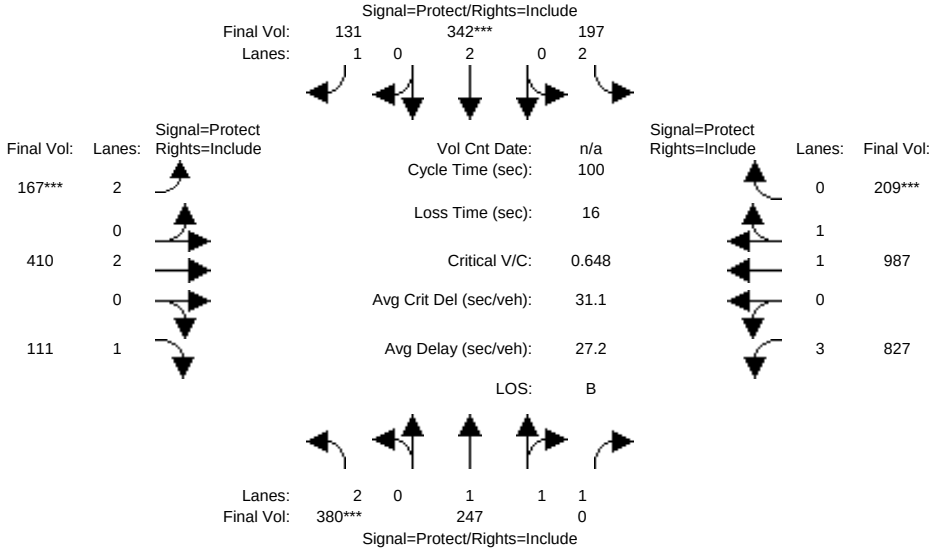
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Existing AM

Intersection #10: Blackhawak Rd/Crow Canyon Rd and Camino Tassajara



Street Name:	Blackhawk Rd/Crow Canyon Rd						Camino Tassajara					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	357	232	223	173	301	196	140	344	269	645	770	163
Growth 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
Initial Bse:	357	232	223	173	301	196	140	344	269	645	770	163
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	357	232	223	173	301	196	140	344	269	645	770	163
User 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
PHF Adj:	0.94	0.94	0.94	0.88	0.88	0.88	0.84	0.84	0.84	0.78	0.78	0.78
PHF Volume:	380	247	237	197	342	223	167	410	320	827	987	209
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	380	247	237	197	342	223	167	410	320	827	987	209
RTOR Reduct:	0	0	237	0	0	92	0	0	209	0	0	0
RTOR Vol:	380	247	0	197	342	131	167	410	111	827	987	209
PCE 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
MLF 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
FinalVolume:	380	247	0	197	342	131	167	410	111	827	987	209
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	0.91	1.00	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.87	1.00	1.00
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	3.00	1.65	0.35
Final Sat.:	3000	3300	1500	3000	3300	1650	3000	3300	1650	4307	2723	577
Capacity Analysis Module:												
Vol/Sat:	0.13	0.07	0.00	0.07	0.10	0.08	0.06	0.12	0.07	0.19	0.36	0.36
Crit Moves:	****				****		****					****
Green/Cycle:	0.16	0.18	0.00	0.12	0.13	0.13	0.07	0.21	0.21	0.33	0.47	0.47
Volume/Cap:	0.77	0.43	0.00	0.53	0.77	0.59	0.77	0.58	0.32	0.58	0.77	0.77
Delay/Veh:	35.9	28.6	0.0	32.9	37.8	34.3	45.7	28.2	25.8	21.9	19.1	25.7
Delay 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
AdjDel/Veh:	35.9	28.6	0.0	32.9	37.8	34.3	45.7	28.2	25.8	21.9	19.1	25.7
DesignQueue:	9	6	0	5	8	6	4	9	5	11	19	19

Note: Queue reported is the number of cars per lane.

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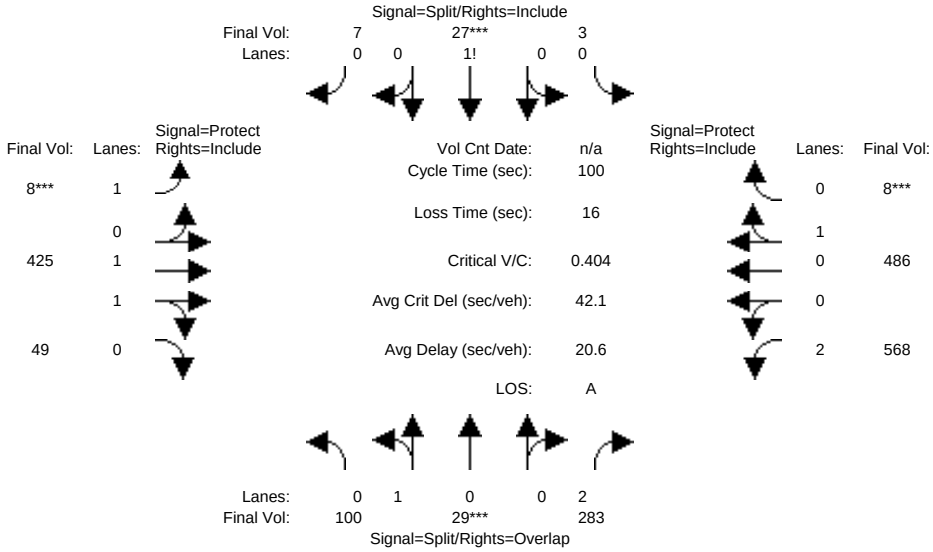
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Existing Sch

Intersection #1: Daiblo Rd and El Cerro Blvd



Street Name:	Diablo Road						El Cerro Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	92	27	548	2	20	5	7	391	45	523	447	7
Growth 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
Initial Bse:	92	27	548	2	20	5	7	391	45	523	447	7
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	92	27	548	2	20	5	7	391	45	523	447	7
User 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
PHF Adj:	0.92	0.92	0.92	0.75	0.75	0.75	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	100	29	596	3	27	7	8	425	49	568	486	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	100	29	596	3	27	7	8	425	49	568	486	8
RTOR Reduct:	0	0	313	0	0	0	0	0	0	0	0	0
RTOR Vol:	100	29	283	3	27	7	8	425	49	568	486	8
PCE 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
MLF 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
FinalVolume:	100	29	283	3	27	7	8	425	49	568	486	8
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	0.77	0.23	2.00	0.07	0.74	0.19	1.00	1.79	0.21	2.00	0.98	0.02
Final Sat.:	1276	374	3000	122	1222	306	1650	2959	341	3000	1625	25
Capacity Analysis Module:												
Vol/Sat:	0.08	0.08	0.09	0.02	0.02	0.02	0.00	0.14	0.14	0.19	0.30	0.30
Crit Moves:		****			****		****					****
Green/Cycle:	0.16	0.16	0.49	0.10	0.10	0.10	0.07	0.25	0.25	0.33	0.51	0.51
Volume/Cap:	0.49	0.49	0.19	0.22	0.22	0.22	0.07	0.58	0.58	0.58	0.59	0.59
Delay/Veh:	30.9	34.1	11.1	33.2	32.0	32.5	33.5	26.1	31.7	22.0	14.0	45.1
Delay 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
AdjDel/Veh:	30.9	34.1	11.1	33.2	32.0	32.5	33.5	26.1	31.7	22.0	14.0	45.1
DesignQueue:	6	6	4	2	2	2	0	10	10	11	14	14

Note: Queue reported is the number of cars per lane.

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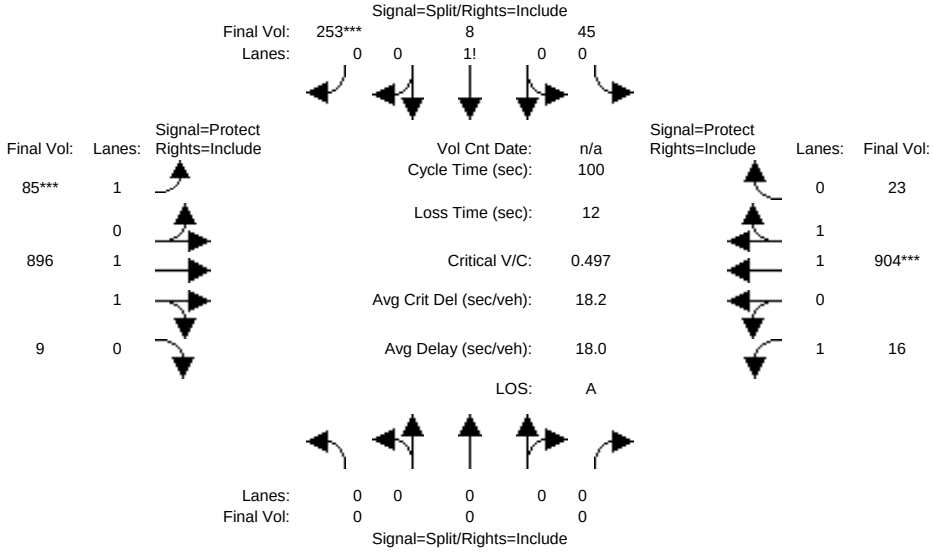
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Existing Sch

Intersection #2: Matadera Wy and Diablo Rd



Street Name:	Metadera Way						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	23	4	129	82	860	9	15	823	21
Growth 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
Initial Bse:	0	0	0	23	4	129	82	860	9	15	823	21
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	23	4	129	82	860	9	15	823	21
User 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
PHF Adj:	1.00	1.00	1.00	0.51	0.51	0.51	0.96	0.96	0.96	0.91	0.91	0.91
PHF Volume:	0	0	0	45	8	253	85	896	9	16	904	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	45	8	253	85	896	9	16	904	23
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	45	8	253	85	896	9	16	904	23
PCE 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
MLF 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
FinalVolume:	0	0	0	45	8	253	85	896	9	16	904	23
Saturation Flow Module:												
Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.15	0.02	0.83	1.00	1.98	0.02	1.00	1.95	0.05
Final Sat.:	0	0	0	254	44	1422	1720	3404	36	1720	3354	86
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.18	0.18	0.18	0.05	0.26	0.26	0.01	0.27	0.27
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.31	0.31	0.31	0.09	0.45	0.45	0.12	0.48	0.48
Volume/Cap:	0.00	0.00	0.00	0.56	0.56	0.56	0.56	0.59	0.59	0.08	0.56	0.56
Delay/Veh:	0.0	0.0	0.0	28.3	48.6	23.2	37.2	16.5	43.8	30.2	14.8	25.8
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	28.3	48.6	23.2	37.2	16.5	43.8	30.2	14.8	25.8
DesignQueue:	0	0	0	12	12	12	4	15	15	1	14	14

Note: Queue reported is the number of cars per lane.

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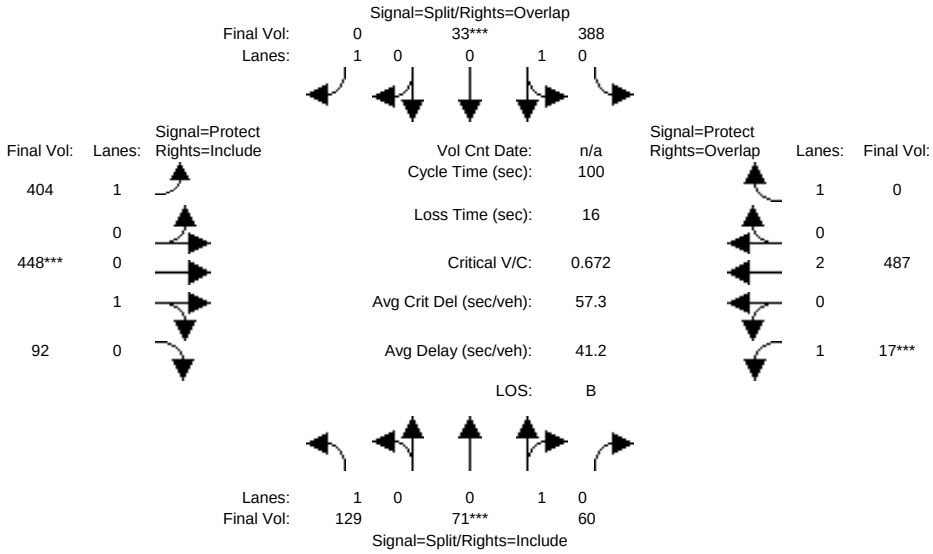
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Existing Sch

Intersection #3: Green Valley Rd and Diablo Rd



Street Name:	Green Valeey Road						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	67	37	31	318	27	288	396	439	90	16	453	268
Growth 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
Initial Bse:	67	37	31	318	27	288	396	439	90	16	453	268
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	67	37	31	318	27	288	396	439	90	16	453	268
User 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
PHF Adj:	0.52	0.52	0.52	0.82	0.82	0.82	0.98	0.98	0.98	0.93	0.93	0.93
PHF Volume:	129	71	60	388	33	351	404	448	92	17	487	288
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	129	71	60	388	33	351	404	448	92	17	487	288
RTOR Reduct:	0	0	0	0	0	351	0	0	0	0	0	288
RTOR Vol:	129	71	60	388	33	0	404	448	92	17	487	0
PCE 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
MLF 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
FinalVolume:	129	71	60	388	33	0	404	448	92	17	487	0
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.54	0.46	0.92	0.08	1.00	1.00	0.83	0.17	1.00	2.00	1.00
Final Sat.:	1650	898	752	1521	129	1650	1650	1369	281	1650	3300	1650
Capacity Analysis Module:												
Vol/Sat:	0.08	0.08	0.08	0.25	0.25	0.00	0.24	0.33	0.33	0.01	0.15	0.00
Crit Moves:		****			****			****		****		
Green/Cycle:	0.10	0.10	0.10	0.29	0.29	0.00	0.28	0.38	0.38	0.07	0.17	0.00
Volume/Cap:	0.78	0.79	0.79	0.87	0.87	0.00	0.88	0.87	0.87	0.15	0.88	0.00
Delay/Veh:	47.8	58.0	61.4	37.4	89.7	0.0	38.8	32.6	55.5	33.7	41.9	0.0
Delay 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
AdjDel/Veh:	47.8	58.0	61.4	37.4	89.7	0.0	38.8	32.6	55.5	33.7	41.9	0.0
DesignQueue:	7	7	7	18	18	0	17	20	20	1	12	0

Note: Queue reported is the number of cars per lane.

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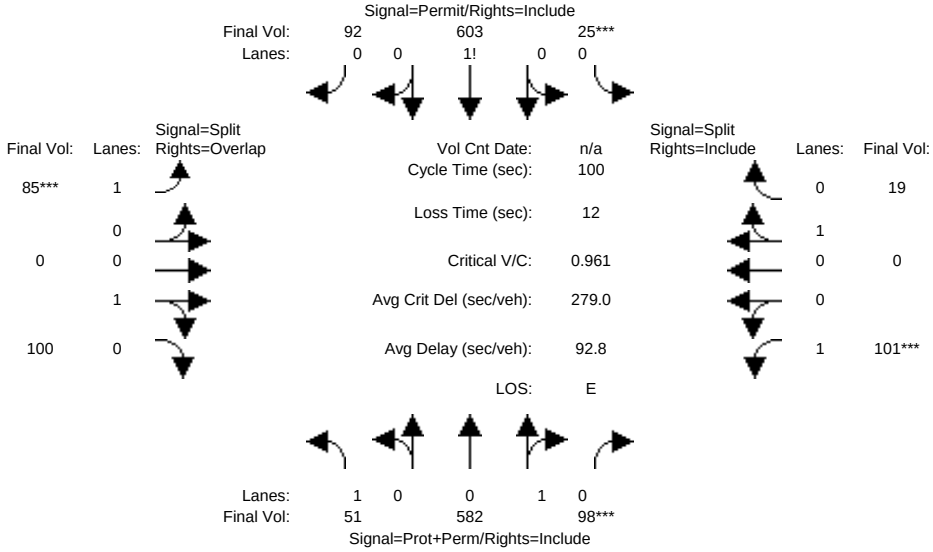
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Existing Sch

Intersection #4: Green Valley Rd and Blemer Rd/Cameo Dr



Street Name:	Green Valley Road						Blemer Road/Cameo Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	47	541	91	20	476	73	47	0	55	89	0	17
Growth 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
Initial Bse:	47	541	91	20	476	73	47	0	55	89	0	17
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	47	541	91	20	476	73	47	0	55	89	0	17
User 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
PHF Adj:	0.93	0.93	0.93	0.79	0.79	0.79	0.55	0.55	0.55	0.88	0.88	0.88
PHF Volume:	51	582	98	25	603	92	85	0	100	101	0	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	582	98	25	603	92	85	0	100	101	0	19
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	51	582	98	25	603	92	85	0	100	101	0	19
PCE 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
MLF 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
FinalVolume:	51	582	98	25	603	92	85	0	100	101	0	19
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.86	0.14	0.03	0.84	0.13	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	1650	1412	238	58	1380	212	1650	0	1650	1650	0	1650
Capacity Analysis Module:												
Vol/Sat:	0.03	0.41	0.41	0.44	0.44	0.44	0.05	0.00	0.06	0.06	0.00	0.01
Crit Moves:			****	****			****			****		
Green/Cycle:	0.09	0.33	0.33	0.35	0.59	0.59	0.10	0.00	0.19	0.10	0.00	0.10
Volume/Cap:	0.33	1.25	1.25	1.25	0.74	0.74	0.52	0.00	0.31	0.61	0.00	0.12
Delay/Veh:	33.1	183	247.7	371.3	14.3	25.8	35.2	0.0	26.8	37.8	0.0	31.6
Delay 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
AdjDel/Veh:	33.1	183	247.7	371.3	14.3	25.8	35.2	0.0	26.8	37.8	0.0	31.6
DesignQueue:	3	28	28	29	18	18	4	0	5	5	0	1

Note: Queue reported is the number of cars per lane.

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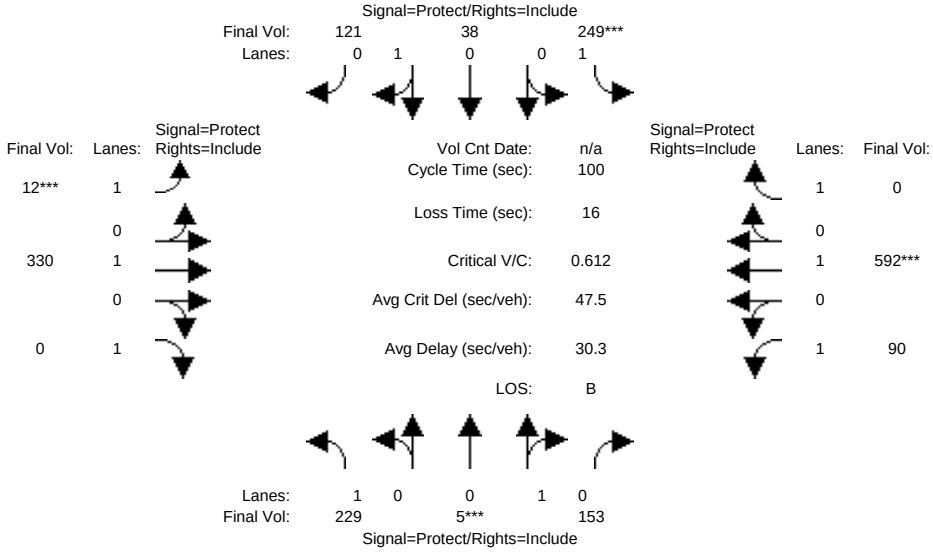
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Existing Sch

Intersection #6: Monte Vista H.S. Main and Stone Valeey Rd



Street Name:	Monte Vista H.S. Main Parking Lot						Stone Valley Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	135	3	90	97	15	47	10	274	43	76	497	7
Growth 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
Initial Bse:	135	3	90	97	15	47	10	274	43	76	497	7
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	135	3	90	97	15	47	10	274	43	76	497	7
User 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
PHF Adj:	0.59	0.59	0.59	0.39	0.39	0.39	0.83	0.83	0.83	0.84	0.84	0.84
PHF Volume:	229	5	153	249	38	121	12	330	52	90	592	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	229	5	153	249	38	121	12	330	52	90	592	8
RTOR Reduct:	0	0	0	0	0	0	0	0	52	0	0	8
RTOR Vol:	229	5	153	249	38	121	12	330	0	90	592	0
PCE 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
MLF 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
FinalVolume:	229	5	153	249	38	121	12	330	0	90	592	0
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.03	0.97	1.00	0.24	0.76	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1650	53	1597	1650	399	1251	1650	1650	1650	1650	1650	1650
Capacity Analysis Module:												
Vol/Sat:	0.14	0.10	0.10	0.15	0.10	0.10	0.01	0.20	0.00	0.05	0.36	0.00
Crit Moves:		****		****			****				****	
Green/Cycle:	0.18	0.12	0.12	0.19	0.13	0.13	0.07	0.39	0.00	0.14	0.46	0.00
Volume/Cap:	0.76	0.79	0.79	0.79	0.73	0.73	0.10	0.51	0.00	0.40	0.79	0.00
Delay/Veh:	37.3	161	45.5	38.0	57.9	42.5	33.6	18.5	0.0	31.0	21.6	0.0
Delay 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
AdjDel/Veh:	37.3	161	45.5	38.0	57.9	42.5	33.6	18.5	0.0	31.0	21.6	0.0
DesignQueue:	11	8	8	12	8	8	1	12	0	4	19	0

Note: Queue reported is the number of cars per lane.

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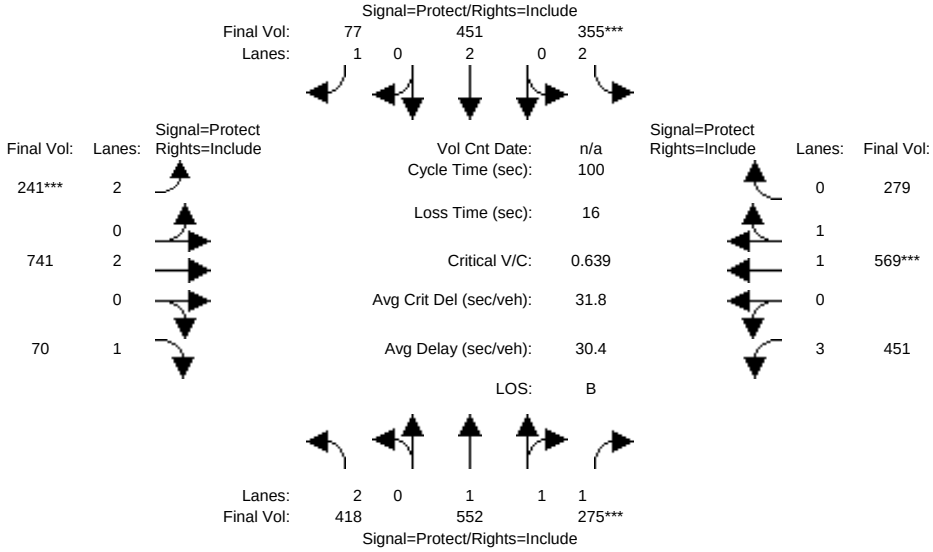
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Existing Sch

Intersection #10: Blackhawak Rd/Crow Canyon Rd and Camino Tassajara



Street Name:	Blackhawk Rd/Crow Canyon Rd						Camino Tassajara					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	385	508	412	309	392	182	212	652	264	392	495	243
Growth 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
Initial Bse:	385	508	412	309	392	182	212	652	264	392	495	243
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	385	508	412	309	392	182	212	652	264	392	495	243
User 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
PHF Adj:	0.92	0.92	0.92	0.87	0.87	0.87	0.88	0.88	0.88	0.87	0.87	0.87
PHF Volume:	418	552	448	355	451	209	241	741	300	451	569	279
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	418	552	448	355	451	209	241	741	300	451	569	279
RTOR Reduct:	0	0	173	0	0	133	0	0	230	0	0	0
RTOR Vol:	418	552	275	355	451	77	241	741	70	451	569	279
PCE 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
MLF 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
FinalVolume:	418	552	275	355	451	77	241	741	70	451	569	279
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	0.91	1.00	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.87	1.00	1.00
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	3.00	1.34	0.66
Final Sat.:	3000	3300	1500	3000	3300	1650	3000	3300	1650	4307	2213	1087
Capacity Analysis Module:												
Vol/Sat:	0.14	0.17	0.18	0.12	0.14	0.05	0.08	0.22	0.04	0.10	0.26	0.26
Crit Moves:			****	****			****				****	
Green/Cycle:	0.20	0.24	0.24	0.16	0.20	0.20	0.11	0.30	0.30	0.14	0.34	0.34
Volume/Cap:	0.70	0.69	0.76	0.76	0.70	0.24	0.76	0.74	0.14	0.74	0.76	0.76
Delay/Veh:	31.0	28.5	33.4	36.1	31.1	26.2	40.5	26.3	19.6	35.1	25.9	28.9
Delay 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
AdjDel/Veh:	31.0	28.5	33.4	36.1	31.1	26.2	40.5	26.3	19.6	35.1	25.9	28.9
DesignQueue:	10	12	12	9	10	3	6	15	3	7	17	17

Note: Queue reported is the number of cars per lane.

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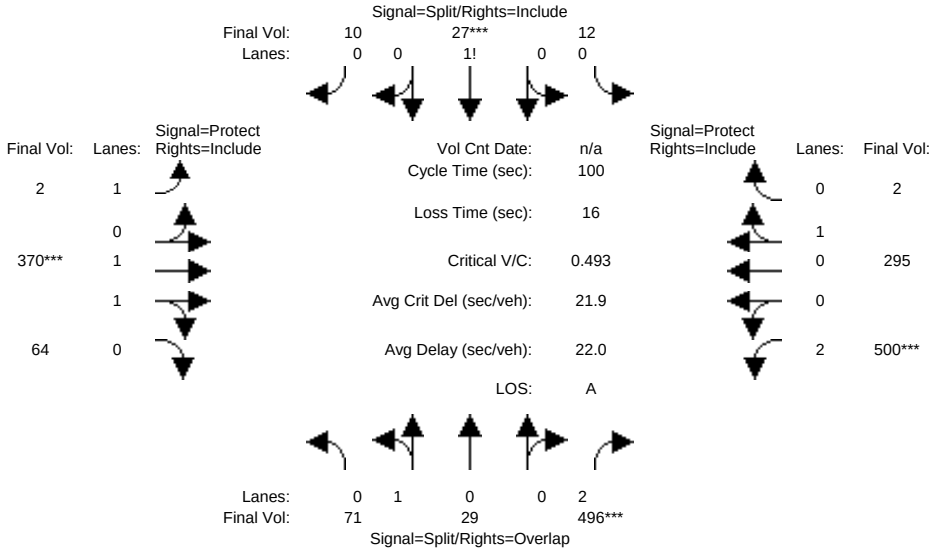
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Existing PM

Intersection #1: Daiblo Rd and El Cerro Blvd



Street Name:	Diablo Road						El Cerro Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	63	26	686	7	16	6	2	333	58	440	260	2
Growth 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
Initial Bse:	63	26	686	7	16	6	2	333	58	440	260	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	63	26	686	7	16	6	2	333	58	440	260	2
User 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
PHF Adj:	0.89	0.89	0.89	0.60	0.60	0.60	0.90	0.90	0.90	0.88	0.88	0.88
PHF Volume:	71	29	771	12	27	10	2	370	64	500	295	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	71	29	771	12	27	10	2	370	64	500	295	2
RTOR Reduct:	0	0	275	0	0	0	0	0	0	0	0	0
RTOR Vol:	71	29	496	12	27	10	2	370	64	500	295	2
PCE 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
MLF 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
FinalVolume:	71	29	496	12	27	10	2	370	64	500	295	2
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	0.71	0.29	2.00	0.24	0.55	0.21	1.00	1.70	0.30	2.00	0.99	0.01
Final Sat.:	1168	482	3000	398	910	341	1650	2810	490	3000	1637	13
Capacity Analysis Module:												
Vol/Sat:	0.06	0.06	0.17	0.03	0.03	0.03	0.00	0.13	0.13	0.17	0.18	0.18
Crit Moves:			****		****			****		****		
Green/Cycle:	0.26	0.26	0.53	0.10	0.10	0.10	0.13	0.21	0.21	0.27	0.34	0.34
Volume/Cap:	0.23	0.23	0.31	0.29	0.29	0.29	0.01	0.63	0.63	0.63	0.53	0.53
Delay/Veh:	22.3	22.4	10.2	33.3	32.7	33.5	29.0	29.2	35.4	26.0	21.0	68.2
Delay 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
AdjDel/Veh:	22.3	22.4	10.2	33.3	32.7	33.5	29.0	29.2	35.4	26.0	21.0	68.2
DesignQueue:	4	4	7	2	2	2	0	10	10	11	11	11

Note: Queue reported is the number of cars per lane.

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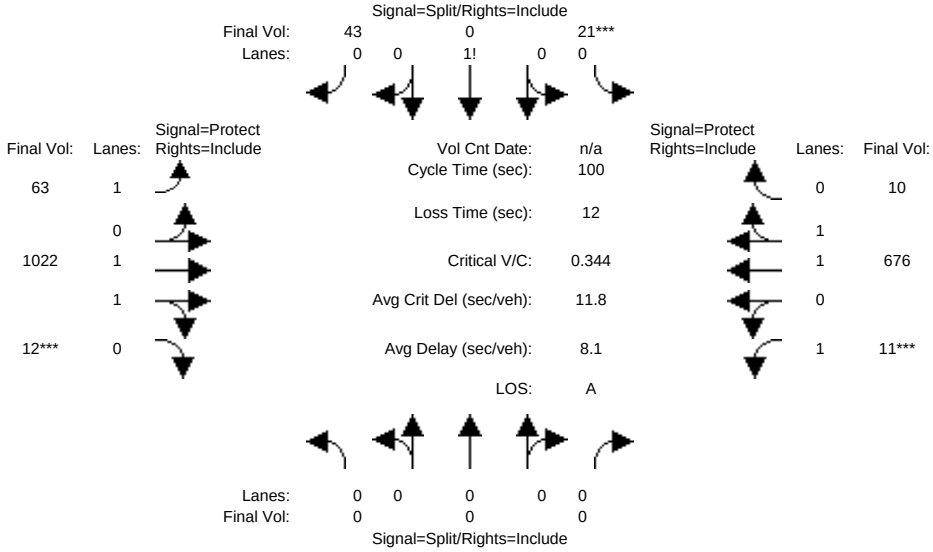
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Existing PM

Intersection #2: Matadera Wy and Diablo Rd



Street Name:	Metadera Way						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	17	0	35	57	920	11	10	615	9
Growth 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
Initial Bse:	0	0	0	17	0	35	57	920	11	10	615	9
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	17	0	35	57	920	11	10	615	9
User 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
PHF Adj:	1.00	1.00	1.00	0.81	0.81	0.81	0.90	0.90	0.90	0.91	0.91	0.91
PHF Volume:	0	0	0	21	0	43	63	1022	12	11	676	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	21	0	43	63	1022	12	11	676	10
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	21	0	43	63	1022	12	11	676	10
PCE 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
MLF 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
FinalVolume:	0	0	0	21	0	43	63	1022	12	11	676	10
Saturation Flow Module:												
Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.33	0.00	0.67	1.00	1.98	0.02	1.00	1.97	0.03
Final Sat.:	0	0	0	562	0	1158	1720	3399	41	1720	3390	50
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.04	0.04	0.30	0.30	0.01	0.20	0.20
Crit Moves:				****					****	****		
Green/Cycle:	0.00	0.00	0.00	0.10	0.00	0.10	0.20	0.71	0.71	0.07	0.58	0.58
Volume/Cap:	0.00	0.00	0.00	0.37	0.00	0.37	0.18	0.42	0.42	0.09	0.35	0.35
Delay/Veh:	0.0	0.0	0.0	34.3	0.0	33.4	25.4	4.7	10.1	33.5	8.6	11.4
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	34.3	0.0	33.4	25.4	4.7	10.1	33.5	8.6	11.4
DesignQueue:	0	0	0	3	0	3	3	9	9	1	8	8

Note: Queue reported is the number of cars per lane.

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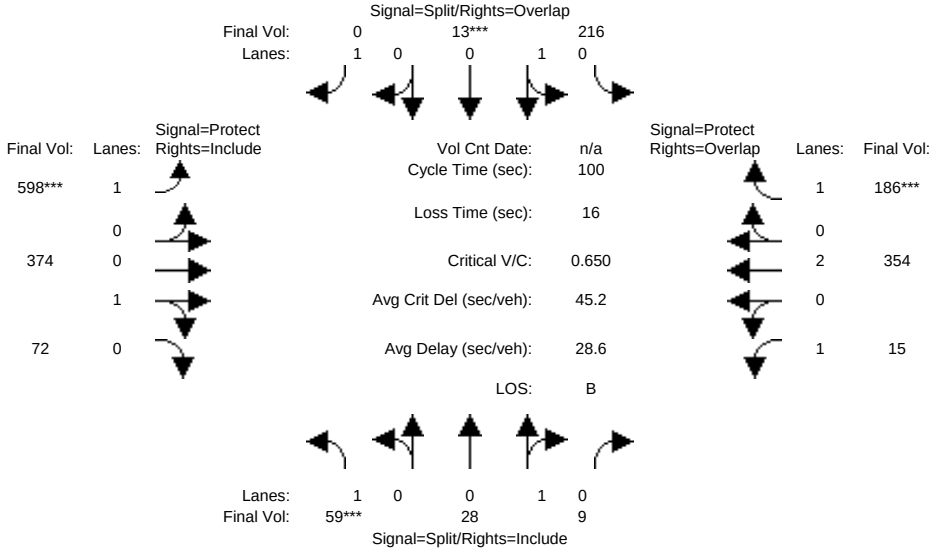
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Existing PM

Intersection #3: Green Valley Rd and Diablo Rd



Street Name:	Green Valeey Road						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	50	24	8	177	11	231	538	337	65	14	326	370
Growth 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
Initial Bse:	50	24	8	177	11	231	538	337	65	14	326	370
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	50	24	8	177	11	231	538	337	65	14	326	370
User 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
PHF Adj:	0.85	0.85	0.85	0.82	0.82	0.82	0.90	0.90	0.90	0.92	0.92	0.92
PHF Volume:	59	28	9	216	13	282	598	374	72	15	354	402
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	59	28	9	216	13	282	598	374	72	15	354	402
RTOR Reduct:	0	0	0	0	0	282	0	0	0	0	0	216
RTOR Vol:	59	28	9	216	13	0	598	374	72	15	354	186
PCE 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
MLF 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
FinalVolume:	59	28	9	216	13	0	598	374	72	15	354	186
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.75	0.25	0.94	0.06	1.00	1.00	0.84	0.16	1.00	2.00	1.00
Final Sat.:	1650	1238	412	1553	97	1650	1650	1383	267	1650	3300	1650
Capacity Analysis Module:												
Vol/Sat:	0.04	0.02	0.02	0.14	0.14	0.00	0.36	0.27	0.27	0.01	0.11	0.11
Crit Moves:	****				****		****					****
Green/Cycle:	0.10	0.10	0.10	0.17	0.17	0.00	0.44	0.45	0.45	0.12	0.14	0.30
Volume/Cap:	0.36	0.23	0.23	0.83	0.83	0.00	0.83	0.60	0.60	0.08	0.79	0.37
Delay/Veh:	32.9	32.1	32.4	44.4	121	0.0	24.8	16.8	21.0	30.3	38.5	21.3
Delay 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
AdjDel/Veh:	32.9	32.1	32.4	44.4	121	0.0	24.8	16.8	21.0	30.3	38.5	21.3
DesignQueue:	3	2	2	11	11	0	20	14	14	1	9	7

Note: Queue reported is the number of cars per lane.

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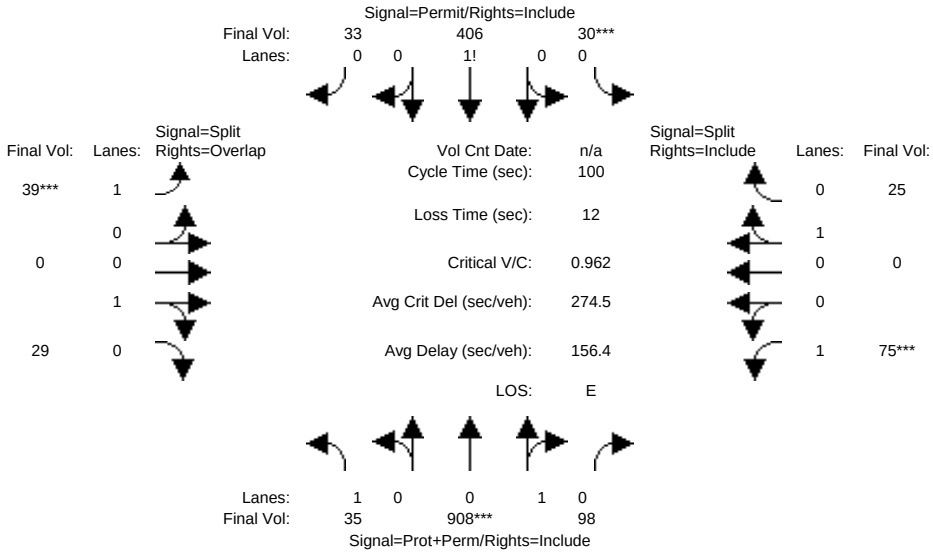
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Existing PM

Intersection #4: Green Valley Rd and Blemer Rd/Cameo Dr



Street Name:	Green Valley Road						Blemer Road/Cameo Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	32	826	89	26	357	29	28	0	21	57	0	19
Growth 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
Initial Bse:	32	826	89	26	357	29	28	0	21	57	0	19
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	32	826	89	26	357	29	28	0	21	57	0	19
User 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
PHF Adj:	0.91	0.91	0.91	0.88	0.88	0.88	0.72	0.72	0.72	0.76	0.76	0.76
PHF Volume:	35	908	98	30	406	33	39	0	29	75	0	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	35	908	98	30	406	33	39	0	29	75	0	25
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	35	908	98	30	406	33	39	0	29	75	0	25
PCE 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
MLF 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
FinalVolume:	35	908	98	30	406	33	39	0	29	75	0	25
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.90	0.10	0.06	0.87	0.07	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	1650	1490	160	104	1430	116	1650	0	1650	1650	0	1650
Capacity Analysis Module:												
Vol/Sat:	0.02	0.61	0.61	0.28	0.28	0.28	0.02	0.00	0.02	0.05	0.00	0.02
Crit Moves:		****		****			****			****		
Green/Cycle:	0.13	0.46	0.46	0.22	0.55	0.55	0.10	0.00	0.23	0.10	0.00	0.10
Volume/Cap:	0.16	1.31	1.31	1.31	0.52	0.52	0.24	0.00	0.08	0.45	0.00	0.15
Delay/Veh:	29.5	229	306.4	430.4	11.6	16.8	32.1	0.0	23.0	34.1	0.0	31.7
Delay 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
AdjDel/Veh:	29.5	229	306.4	430.4	11.6	16.8	32.1	0.0	23.0	34.1	0.0	31.7
DesignQueue:	2	35	35	22	13	13	2	0	1	4	0	1

Note: Queue reported is the number of cars per lane.

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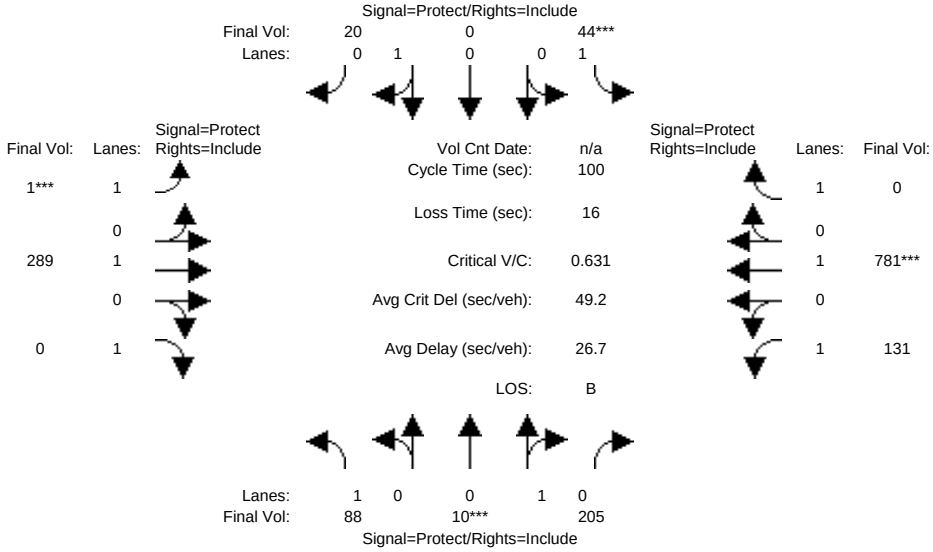
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Existing PM

Intersection #6: Monte Vista H.S. Main and Stone Valeey Rd



Street Name:	Monte Vista H.S. Main Parking Lot						Stone Valley Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	52	6	121	18	0	8	1	275	45	123	734	1
Growth 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
Initial Bse:	52	6	121	18	0	8	1	275	45	123	734	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	52	6	121	18	0	8	1	275	45	123	734	1
User 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
PHF Adj:	0.59	0.59	0.59	0.41	0.41	0.41	0.95	0.95	0.95	0.94	0.94	0.94
PHF Volume:	88	10	205	44	0	20	1	289	47	131	781	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	88	10	205	44	0	20	1	289	47	131	781	1
RTOR Reduct:	0	0	0	0	0	0	0	0	47	0	0	1
RTOR Vol:	88	10	205	44	0	20	1	289	0	131	781	0
PCE 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
MLF 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
FinalVolume:	88	10	205	44	0	20	1	289	0	131	781	0
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.05	0.95	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1650	78	1572	1650	0	1650	1650	1650	1650	1650	1650	1650
Capacity Analysis Module:												
Vol/Sat:	0.05	0.13	0.13	0.03	0.00	0.01	0.00	0.18	0.00	0.08	0.47	0.00
Crit Moves:		****		****			****				****	
Green/Cycle:	0.09	0.15	0.15	0.07	0.00	0.07	0.07	0.43	0.00	0.19	0.55	0.00
Volume/Cap:	0.59	0.86	0.86	0.38	0.00	0.17	0.01	0.41	0.00	0.41	0.86	0.00
Delay/Veh:	37.7	155	49.9	35.2	0.0	33.8	33.3	15.6	0.0	27.8	21.0	0.0
Delay 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
AdjDel/Veh:	37.7	155	49.9	35.2	0.0	33.8	33.3	15.6	0.0	27.8	21.0	0.0
DesignQueue:	5	10	10	2	0	1	0	10	0	6	22	0

Note: Queue reported is the number of cars per lane.

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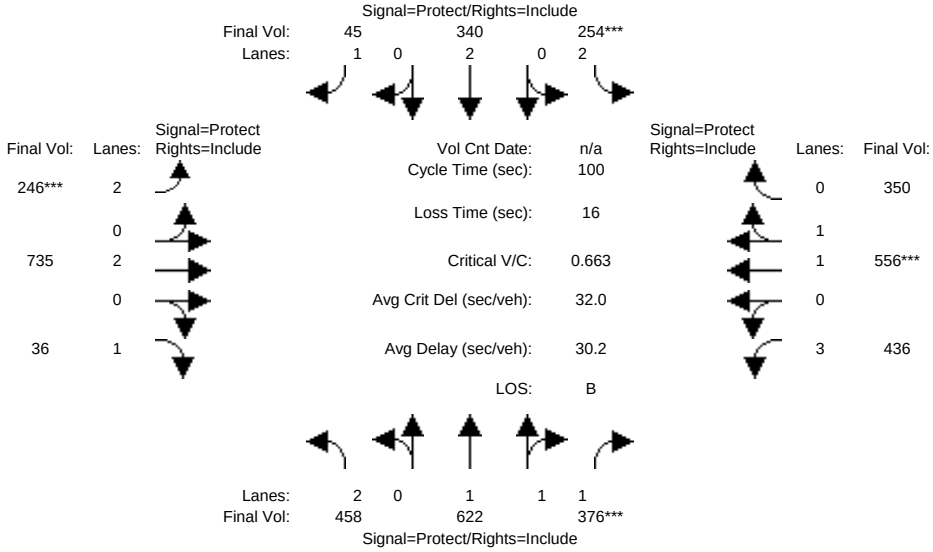
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Existing PM

Intersection #10: Blackhawak Rd/Crow Canyon Rd and Camino Tassajara



Street Name:	Blackhawk Rd/Crow Canyon Rd						Camino Tassajara					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	417	566	494	249	333	177	219	654	256	384	489	308
Growth 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
Initial Bse:	417	566	494	249	333	177	219	654	256	384	489	308
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	417	566	494	249	333	177	219	654	256	384	489	308
User 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
PHF Adj:	0.91	0.91	0.91	0.98	0.98	0.98	0.89	0.89	0.89	0.88	0.88	0.88
PHF Volume:	458	622	543	254	340	181	246	735	288	436	556	350
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	458	622	543	254	340	181	246	735	288	436	556	350
RTOR Reduct:	0	0	167	0	0	135	0	0	252	0	0	0
RTOR Vol:	458	622	376	254	340	45	246	735	36	436	556	350
PCE 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
MLF 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
FinalVolume:	458	622	376	254	340	45	246	735	36	436	556	350
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	0.91	1.00	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.87	1.00	1.00
Lanes:	2.00	1.87	1.13	2.00	2.00	1.00	2.00	2.00	1.00	3.00	1.23	0.77
Final Sat.:	3000	3086	1694	3000	3300	1650	3000	3300	1650	4307	2025	1275
Capacity Analysis Module:												
Vol/Sat:	0.15	0.20	0.22	0.08	0.10	0.03	0.08	0.22	0.02	0.10	0.27	0.27
Crit Moves:			****	****			****				****	
Green/Cycle:	0.23	0.28	0.28	0.11	0.16	0.16	0.10	0.31	0.31	0.14	0.35	0.35
Volume/Cap:	0.66	0.72	0.79	0.79	0.66	0.18	0.79	0.72	0.07	0.72	0.79	0.79
Delay/Veh:	28.4	26.9	31.6	42.0	32.7	28.2	42.4	25.3	18.7	34.4	26.8	29.0
Delay 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
AdjDel/Veh:	28.4	26.9	31.6	42.0	32.7	28.2	42.4	25.3	18.7	34.4	26.8	29.0
DesignQueue:	10	14	14	6	8	2	6	15	1	7	18	18

Note: Queue reported is the number of cars per lane.

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HCM 2010 Signalized Intersection Summary
1: Diablo Rd & El Cerro Blvd & Ackerman Dr

Timing Plan: AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	354	53	557	468	3	100	16	554	4	35	3
Future Volume (veh/h)	9	354	53	557	468	3	100	16	554	4	35	3
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.98	1.00		0.97	1.00		0.95
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	11	432	65	626	526	3	128	21	710	6	50	4
Adj No. of Lanes	1	2	0	2	1	0	0	1	2	0	1	0
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.78	0.78	0.78	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	15	833	125	747	886	5	375	62	1268	10	80	6
Arrive On Green	0.01	0.27	0.27	0.22	0.48	0.48	0.24	0.24	0.24	0.05	0.05	0.05
Sat Flow, veh/h	1774	3088	462	3442	1850	11	1534	252	2710	182	1520	122
Grp Volume(v), veh/h	11	246	251	626	0	529	149	0	710	60	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1781	1721	0	1861	1786	0	1355	1824	0	0
Q Serve(g_s), s	0.5	8.8	8.9	12.9	0.0	15.4	5.1	0.0	14.2	2.4	0.0	0.0
Cycle Q Clear(g_c), s	0.5	8.8	8.9	12.9	0.0	15.4	5.1	0.0	14.2	2.4	0.0	0.0
Prop In Lane	1.00		0.26	1.00		0.01	0.86		1.00	0.10		0.07
Lane Grp Cap(c), veh/h	15	478	481	747	0	891	437	0	1268	96	0	0
V/C Ratio(X)	0.76	0.52	0.52	0.84	0.00	0.59	0.34	0.00	0.56	0.62	0.00	0.00
Avail Cap(c_a), veh/h	478	835	840	1624	0	891	602	0	1518	615	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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.7	23.0	23.0	27.8	0.0	14.1	23.1	0.0	14.6	34.4	0.0	0.0
Incr Delay (d2), s/veh	25.0	1.2	1.2	1.0	0.0	1.3	0.2	0.0	0.1	6.4	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	0.3	4.4	4.5	6.2	0.0	8.1	2.5	0.0	5.2	1.4	0.0	0.0
LnGrp Delay(d),s/veh	61.7	24.2	24.3	28.8	0.0	15.4	23.3	0.0	14.7	40.8	0.0	0.0
LnGrp LOS	E	C	C	C		B	C		B	D		
Approach Vol, veh/h		508			1155			859			60	
Approach Delay, s/veh		25.0			22.6			16.2			40.8	
Approach LOS		C			C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.1	24.0		7.9	4.6	39.5		22.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	35.0	35.0		25.0	20.0	35.0		25.0
Max Q Clear Time (g_c+I1), s	14.9	10.9		4.4	2.5	17.4		16.2
Green Ext Time (p_c), s	1.2	9.1		0.2	0.0	8.3		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	21.4
HCM 2010 LOS	C

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	754	42	31	848	19	0	0	0	10	15	139
Future Volume (veh/h)	118	754	42	31	848	19	0	0	0	10	15	139
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98				1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	142	908	51	36	986	22				22	33	302
Adj No. of Lanes	1	2	0	1	2	0				0	1	0
Peak Hour Factor	0.83	0.83	0.83	0.86	0.86	0.86				0.46	0.46	0.46
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	180	1860	104	44	1663	37				25	38	349
Arrive On Green	0.10	0.55	0.55	0.02	0.47	0.47				0.26	0.26	0.26
Sat Flow, veh/h	1774	3402	191	1774	3537	79				96	144	1322
Grp Volume(v), veh/h	142	472	487	36	493	515				357	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1823	1774	1770	1847				1563	0	0
Q Serve(g_s), s	5.7	12.1	12.1	1.5	15.0	15.0				15.9	0.0	0.0
Cycle Q Clear(g_c), s	5.7	12.1	12.1	1.5	15.0	15.0				15.9	0.0	0.0
Prop In Lane	1.00		0.10	1.00		0.04				0.06		0.85
Lane Grp Cap(c), veh/h	180	967	997	44	832	868				413	0	0
V/C Ratio(X)	0.79	0.49	0.49	0.82	0.59	0.59				0.86	0.00	0.00
Avail Cap(c_a), veh/h	486	969	999	486	969	1011				471	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	32.1	10.2	10.2	35.4	14.2	14.2				25.6	0.0	0.0
Incr Delay (d2), s/veh	2.9	0.5	0.5	12.7	1.0	1.0				12.8	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
%ile BackOfQ(50%),veh/ln	2.9	5.9	6.1	0.9	7.5	7.8				8.3	0.0	0.0
LnGrp Delay(d),s/veh	35.0	10.8	10.8	48.2	15.2	15.2				38.4	0.0	0.0
LnGrp LOS	C	B	B	D	B	B				D		
Approach Vol, veh/h		1101			1044						357	
Approach Delay, s/veh		13.9			16.3						38.4	
Approach LOS		B			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	5.8	43.9		23.3	11.4	38.3		
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s	20.0	40.0		22.0	20.0	40.0		
Max Q Clear Time (g_c+I1), s	3.5	14.1		17.9	7.7	17.0		
Green Ext Time (p_c), s	0.0	19.0		0.7	0.1	17.4		

Intersection Summary	
HCM 2010 Ctrl Delay	18.4
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
3: McCauley Rd/Green Valley Rd & Diablo Rd

Timing Plan: AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	348	359	63	70	389	303	121	54	41	190	68	354
Future Volume (veh/h)	348	359	63	70	389	303	121	54	41	190	68	354
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.95	1.00		1.00	1.00		0.95
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	464	479	84	88	486	379	212	95	72	229	82	427
Adj No. of Lanes	1	1	0	1	2	1	1	1	0	0	1	1
Peak Hour Factor	0.75	0.75	0.75	0.80	0.80	0.80	0.57	0.57	0.57	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	500	696	122	109	816	728	239	132	100	319	114	808
Arrive On Green	0.28	0.45	0.45	0.06	0.23	0.23	0.13	0.13	0.13	0.24	0.24	0.24
Sat Flow, veh/h	1774	1544	271	1774	3539	1501	1774	983	745	1323	474	1501
Grp Volume(v), veh/h	464	0	563	88	486	379	212	0	167	311	0	427
Grp Sat Flow(s),veh/h/ln	1774	0	1815	1774	1770	1501	1774	0	1728	1797	0	1501
Q Serve(g_s), s	36.4	0.0	35.4	7.0	17.5	25.5	16.8	0.0	13.3	22.7	0.0	27.2
Cycle Q Clear(g_c), s	36.4	0.0	35.4	7.0	17.5	25.5	16.8	0.0	13.3	22.7	0.0	27.2
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.43	0.74		1.00
Lane Grp Cap(c), veh/h	500	0	818	109	816	728	239	0	233	434	0	808
V/C Ratio(X)	0.93	0.00	0.69	0.81	0.60	0.52	0.89	0.00	0.72	0.72	0.00	0.53
Avail Cap(c_a), veh/h	620	0	818	186	1112	854	310	0	302	627	0	970
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.0	0.0	31.3	66.4	49.1	26.7	60.9	0.0	59.3	49.8	0.0	22.8
Incr Delay (d2), s/veh	19.1	0.0	2.6	5.3	0.8	0.7	18.3	0.0	3.4	3.2	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.4	0.0	18.3	3.6	8.7	15.1	9.5	0.0	6.6	11.7	0.0	11.4
LnGrp Delay(d),s/veh	69.2	0.0	33.8	71.6	50.0	27.4	79.2	0.0	62.8	53.0	0.0	23.5
LnGrp LOS	E		C	E	D	C	E		E	D		C
Approach Vol, veh/h		1027			953			379			738	
Approach Delay, s/veh		49.8			43.0			72.0			35.9	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.8	68.6		38.5	44.3	37.0		23.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	15.0	40.0		50.0	50.0	45.0		25.0
Max Q Clear Time (g_c+I1), s	9.0	37.4		29.2	38.4	27.5		18.8
Green Ext Time (p_c), s	0.0	2.0		5.4	1.9	5.5		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	47.1
HCM 2010 LOS	D

Notes

User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	86	70	114	605	524	99
Future Volume (vph)	86	70	114	605	524	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.92	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1629	1583	1770	1863	1814	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1629	1583	1770	1863	1814	
Peak-hour factor, PHF	0.46	0.46	0.76	0.76	0.75	0.75
Adj. Flow (vph)	187	152	150	796	699	132
RTOR Reduction (vph)	0	106	0	0	4	0
Lane Group Flow (vph)	187	46	150	796	827	0
Confl. Peds. (#/hr)	28					3
Confl. Bikes (#/hr)						3
Turn Type	Perm	pm+ov	Prot	NA	NA	
Protected Phases		5	5	2	6	
Permitted Phases	4	4				
Actuated Green, G (s)	16.5	29.2	12.7	57.2	40.5	
Effective Green, g (s)	16.5	29.2	12.7	57.2	40.5	
Actuated g/C Ratio	0.17	0.30	0.13	0.59	0.42	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	1.8	1.8	1.8	3.0	3.0	
Lane Grp Cap (vph)	277	543	232	1102	759	
v/s Ratio Prot		0.01	0.08	c0.43	c0.46	
v/s Ratio Perm	c0.11	0.02				
v/c Ratio	0.68	0.08	0.65	0.72	1.09	
Uniform Delay, d1	37.6	24.2	39.9	14.1	28.1	
Progression Factor	1.00	1.00	1.00	1.00	0.50	
Incremental Delay, d2	5.0	0.0	4.6	2.4	51.7	
Delay (s)	42.6	24.2	44.4	16.5	65.7	
Level of Service	D	C	D	B	E	
Approach Delay (s)	34.4			20.9	65.7	
Approach LOS	C			C	E	

Intersection Summary			
HCM 2000 Control Delay	40.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	96.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	95	37	668	23	9	528
Future Volume (vph)	95	37	668	23	9	528
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	1.00			1.00
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1765	1583	1853			1861
Flt Permitted	0.95	1.00	1.00			0.98
Satd. Flow (perm)	1765	1583	1853			1831
Peak-hour factor, PHF	0.85	0.85	0.76	0.76	0.75	0.75
Adj. Flow (vph)	112	44	879	30	12	704
RTOR Reduction (vph)	0	33	1	0	0	0
Lane Group Flow (vph)	112	11	908	0	0	716
Confl. Peds. (#/hr)	1			2	2	
Confl. Bikes (#/hr)				1		
Turn Type	Perm	Perm	NA		Perm	NA
Protected Phases			2			6
Permitted Phases	3	3			6	
Actuated Green, G (s)	11.0	11.0	57.2			40.5
Effective Green, g (s)	11.0	11.0	57.2			40.5
Actuated g/C Ratio	0.11	0.11	0.59			0.42
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	2.1	2.1	3.0			3.0
Lane Grp Cap (vph)	200	180	1096			766
v/s Ratio Prot			c0.49			
v/s Ratio Perm	c0.06	0.01				c0.39
v/c Ratio	0.56	0.06	0.83			0.93
Uniform Delay, d1	40.6	38.2	15.8			26.8
Progression Factor	1.00	1.00	0.43			1.00
Incremental Delay, d2	2.3	0.1	4.7			18.4
Delay (s)	42.8	38.3	11.5			45.2
Level of Service	D	D	B			D
Approach Delay (s)	41.6		11.5			45.2
Approach LOS	D		B			D

Intersection Summary			
HCM 2000 Control Delay	27.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	96.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	143
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	22	53	412	0	82	101	1	0	710	10	28
Future Vol, veh/h	0	22	53	412	0	82	101	1	0	710	10	28
Peak Hour Factor	0.92	0.60	0.60	0.60	0.92	0.98	0.98	0.98	0.92	0.69	0.69	0.69
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	37	88	687	0	84	103	1	0	1029	14	41
Number of Lanes	0	1	1	1	0	1	2	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	3
HCM Control Delay	201.6	15.8	129.3
HCM LOS	F	C	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	97%	0%	100%	0%	0%	100%	0%	0%	11%	0%
Vol Thru, %	0%	3%	0%	0%	100%	0%	0%	100%	97%	89%	0%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	3%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	362	358	28	22	53	412	82	67	35	28	28
LT Vol	362	348	0	22	0	0	82	0	0	3	0
Through Vol	0	10	0	0	53	0	0	67	34	25	0
RT Vol	0	0	28	0	0	412	0	0	1	0	28
Lane Flow Rate	525	519	41	37	88	687	84	69	35	34	34
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	1.193	1.177	0.079	0.09	0.204	1.45	0.231	0.18	0.093	0.095	0.088
Departure Headway (Hd)	8.937	8.923	7.728	9.112	8.604	7.892	10.935	10.421	10.4	10.792	10.038
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	409	410	466	396	420	467	331	346	347	334	359
Service Time	6.637	6.623	5.428	6.812	6.304	5.592	8.635	8.121	8.1	8.492	7.738
HCM Lane V/C Ratio	1.284	1.266	0.088	0.093	0.21	1.471	0.254	0.199	0.101	0.102	0.095
HCM Control Delay	136.8	130.9	11.1	12.7	13.5	235.9	16.9	15.4	14.2	14.6	13.7
HCM Lane LOS	F	F	B	B	B	F	C	C	B	B	B
HCM 95th-tile Q	19.1	18.5	0.3	0.3	0.8	33.1	0.9	0.6	0.3	0.3	0.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↑	↱
Traffic Vol, veh/h	0	3	25	28
Future Vol, veh/h	0	3	25	28
Peak Hour Factor	0.92	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	4	30	34
Number of Lanes	0	0	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	14.2
HCM LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	279	125	199	329	158	86	4	11	2	1	0
Future Volume (veh/h)	55	279	125	199	329	158	86	4	11	2	1	0
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.68	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	72	367	164	269	445	214	137	6	17	5	3	0
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.76	0.76	0.76	0.74	0.74	0.74	0.63	0.63	0.63	0.38	0.38	0.38
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	94	598	493	312	828	698	176	93	265	7	375	0
Arrive On Green	0.05	0.32	0.32	0.18	0.44	0.44	0.10	0.30	0.30	0.00	0.20	0.00
Sat Flow, veh/h	1774	1863	1535	1774	1863	1571	1774	315	894	1774	1863	0
Grp Volume(v), veh/h	72	367	164	269	445	214	137	0	23	5	3	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1535	1774	1863	1571	1774	0	1209	1774	1863	0
Q Serve(g_s), s	3.3	13.6	6.6	12.0	14.2	7.1	6.1	0.0	1.1	0.2	0.1	0.0
Cycle Q Clear(g_c), s	3.3	13.6	6.6	12.0	14.2	7.1	6.1	0.0	1.1	0.2	0.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.74	1.00		0.00
Lane Grp Cap(c), veh/h	94	598	493	312	828	698	176	0	358	7	375	0
V/C Ratio(X)	0.77	0.61	0.33	0.86	0.54	0.31	0.78	0.00	0.06	0.72	0.01	0.00
Avail Cap(c_a), veh/h	654	915	754	654	915	772	545	0	445	545	686	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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	38.1	23.4	21.0	32.6	16.5	14.6	35.8	0.0	20.6	40.5	26.0	0.0
Incr Delay (d2), s/veh	4.9	1.5	0.6	2.8	0.8	0.4	7.3	0.0	0.1	39.7	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	1.7	7.2	2.9	6.1	7.5	3.1	3.4	0.0	0.4	0.2	0.1	0.0
LnGrp Delay(d),s/veh	43.0	24.8	21.6	35.4	17.3	14.9	43.1	0.0	20.6	80.2	26.0	0.0
LnGrp LOS	D	C	C	D	B	B	D		C	F	C	
Approach Vol, veh/h		603			928			160			8	
Approach Delay, s/veh		26.1			22.0			39.9			59.9	
Approach LOS		C			C			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.3	30.7	4.3	28.1	8.3	40.7	12.1	20.4
Change Period (Y+Rc), s	4.0	4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	30.0	40.0	25.0	30.0	30.0	40.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	14.0	15.6	2.2	3.1	5.3	16.2	8.1	2.1
Green Ext Time (p_c), s	0.4	10.6	0.0	0.1	0.1	10.5	0.3	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.3
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	41.6
Intersection LOS	E

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Lane Configurations									
Traffic Vol, veh/h	0	198	336	0	495	71	0	61	114
Future Vol, veh/h	0	198	336	0	495	71	0	61	114
Peak Hour Factor	0.92	0.86	0.86	0.92	0.93	0.93	0.92	0.52	0.52
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	230	391	0	532	76	0	117	219
Number of Lanes	0	1	1	0	1	0	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	20.8	77.9	14.3
HCM LOS	C	F	B

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	87%	0%	0%
Vol Right, %	0%	0%	13%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	198	336	566	61	114
LT Vol	198	0	0	61	0
Through Vol	0	336	495	0	0
RT Vol	0	0	71	0	114
Lane Flow Rate	230	391	609	117	219
Geometry Grp	7	7	4	7	7
Degree of Util (X)	0.448	0.706	1.056	0.26	0.413
Departure Headway (Hd)	7.193	6.681	6.245	8.213	6.978
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	504	543	584	440	520
Service Time	4.893	4.381	4.281	5.913	4.678
HCM Lane V/C Ratio	0.456	0.72	1.043	0.266	0.421
HCM Control Delay	15.6	23.8	77.9	13.8	14.5
HCM Lane LOS	C	C	F	B	B
HCM 95th-tile Q	2.3	5.6	17.2	1	2

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	20	414	19	92	40	0	0	29	53
Future Vol, veh/h	0	0	0	20	414	19	92	40	0	0	29	53
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	84	84	84	91	91	91	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	24	493	23	101	44	0	0	37	67

Major/Minor	Major2			Minor1		Minor2			
Conflicting Flow All	0	0	0	604	564	-	-	553	505
Stage 1	-	-	-	0	0	-	-	553	-
Stage 2	-	-	-	604	564	-	-	0	-
Critical Hdwy	4.12	-	-	7.12	6.52	-	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-	-	-	-
Follow-up Hdwy	2.218	-	-	3.518	4.018	-	-	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	410	435	0	0	441	567
Stage 1	-	-	-	-	-	0	0	514	-
Stage 2	-	-	-	485	508	0	0	-	-
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	338	435	-	-	441	566
Mov Cap-2 Maneuver	-	-	-	338	435	-	-	441	-
Stage 1	-	-	-	-	-	-	-	514	-
Stage 2	-	-	-	397	508	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		18.3	13.8
HCM LOS		C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	338	435	-	-	-	514
HCM Lane V/C Ratio	0.299	0.101	-	-	-	0.202
HCM Control Delay (s)	20.1	14.2	-	-	-	13.8
HCM Lane LOS	C	B	-	-	-	B
HCM 95th %tile Q(veh)	1.2	0.3	-	-	-	0.7

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	336	31	0	0	0	0	105	41	28	21	0
Future Vol, veh/h	27	336	31	0	0	0	0	105	41	28	21	0
Conflicting Peds, #/hr	1	0	0	0	0	0	0	0	4	4	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	85	-	100	0	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	92	92	92	91	91	91	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	373	34	0	0	0	0	115	45	35	27	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	1	0	0	-	452	395	513	469	-
Stage 1	-	-	-	-	451	-	1	1	-
Stage 2	-	-	-	-	1	-	512	468	-
Critical Hdwy	4.12	-	-	-	6.52	6.22	7.12	6.52	-
Critical Hdwy Stg 1	-	-	-	-	5.52	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	-	4.018	3.318	3.518	4.018	-
Pot Cap-1 Maneuver	1622	-	-	0	503	654	472	492	0
Stage 1	-	-	-	0	571	-	-	-	0
Stage 2	-	-	-	0	-	-	545	561	0
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	1622	-	-	-	490	654	353	480	-
Mov Cap-2 Maneuver	-	-	-	-	490	-	353	480	-
Stage 1	-	-	-	-	557	-	-	-	-
Stage 2	-	-	-	-	-	-	393	548	-

Approach	EB	NB	SB
HCM Control Delay, s	0.5	12.6	14.8
HCM LOS		B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	SBLn1	SBLn2
Capacity (veh/h)	490	490	654	1622	-	-	353	480
HCM Lane V/C Ratio	0.118	0.118	0.069	0.018	-	-	0.1	0.055
HCM Control Delay (s)	13.3	13.3	10.9	7.3	0	-	16.3	12.9
HCM Lane LOS	B	B	B	A	A	-	C	B
HCM 95th %tile Q(veh)	0.4	0.4	0.2	0.1	-	-	0.3	0.2

Intersection	
Intersection Delay, s/veh	18
Intersection LOS	C

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations									
Traffic Vol, veh/h	0	277	147	0	277	110	0	86	0
Future Vol, veh/h	0	277	147	0	277	110	0	86	0
Peak Hour Factor	0.92	0.84	0.84	0.92	0.72	0.72	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	330	175	0	385	153	0	95	0
Number of Lanes	0	1	1	0	1	2	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	18	18.9	12.9
HCM LOS	C	C	B

Lane	NBLn1	NBLn2	NBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	277	55	55	277	147	86	0
LT Vol	0	0	0	277	0	86	0
Through Vol	277	0	0	0	0	0	0
RT Vol	0	55	55	0	147	0	0
Lane Flow Rate	385	76	76	330	175	95	0
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.698	0.124	0.086	0.643	0.283	0.21	0
Departure Headway (Hd)	6.531	5.821	4.063	7.021	5.813	8.012	7.498
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	550	613	874	514	616	446	0
Service Time	4.294	3.584	1.825	4.781	3.572	5.803	5.289
HCM Lane V/C Ratio	0.7	0.124	0.087	0.642	0.284	0.213	0
HCM Control Delay	23.1	9.4	7.2	21.7	10.9	12.9	10.3
HCM Lane LOS	C	A	A	C	B	B	N
HCM 95th-tile Q	5.5	0.4	0.3	4.5	1.2	0.8	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	344	269	645	770	163	357	232	223	173	301	196
Future Volume (vph)	140	344	269	645	770	163	357	232	223	173	301	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Lane Util. Factor	0.97	0.95	1.00	0.94	0.95		0.97	0.91	0.91	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.96	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1551	4990	3436		3433	3242	1417	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1551	4990	3436		3433	3242	1417	3433	3539	1583
Peak-hour factor, PHF	0.78	0.78	0.78	0.84	0.84	0.84	0.94	0.94	0.94	0.88	0.88	0.88
Adj. Flow (vph)	179	441	345	768	917	194	380	247	237	197	342	223
RTOR Reduction (vph)	0	0	264	0	9	0	0	19	116	0	0	186
Lane Group Flow (vph)	179	441	81	768	1102	0	380	316	33	197	342	37
Confl. Peds. (#/hr)			7			3			5			
Confl. Bikes (#/hr)			2			3						
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	11.3	25.5	25.5	36.0	50.2		18.6	27.0	27.0	11.9	19.9	19.9
Effective Green, g (s)	11.3	25.5	25.5	36.0	50.2		18.6	27.0	27.0	11.9	19.9	19.9
Actuated g/C Ratio	0.09	0.21	0.21	0.30	0.42		0.15	0.22	0.22	0.10	0.16	0.16
Clearance Time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	321	747	327	1487	1427		528	724	316	338	582	260
v/s Ratio Prot	0.05	c0.12		0.15	c0.32		c0.11	0.10		0.06	c0.10	
v/s Ratio Perm			0.05						0.02			0.02
v/c Ratio	0.56	0.59	0.25	0.52	0.77		0.72	0.44	0.11	0.58	0.59	0.14
Uniform Delay, d1	52.4	42.9	39.7	35.2	30.4		48.6	40.4	37.3	52.1	46.7	43.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	1.5	0.5	0.1	2.8		3.9	0.6	0.2	1.7	1.8	0.3
Delay (s)	53.6	44.4	40.2	35.3	33.2		52.5	40.9	37.5	53.7	48.5	43.5
Level of Service	D	D	D	D	C		D	D	D	D	D	D
Approach Delay (s)		44.6			34.1			45.4			48.4	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	41.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.8	Sum of lost time (s)	20.8
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM 2010 Signalized Intersection Summary
1: Diablo Rd & El Cerro Blvd & Ackerman Dr

Timing Plan: School PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	391	45	523	447	7	92	27	548	2	20	5
Future Volume (veh/h)	7	391	45	523	447	7	92	27	548	2	20	5
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.96
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	8	425	49	568	486	8	100	29	596	3	27	7
Adj No. of Lanes	1	2	0	2	1	0	0	1	2	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	11	913	105	705	884	15	311	90	1176	6	50	13
Arrive On Green	0.01	0.29	0.29	0.20	0.48	0.48	0.22	0.22	0.22	0.04	0.04	0.04
Sat Flow, veh/h	1774	3195	366	3442	1826	30	1390	403	2702	144	1298	336
Grp Volume(v), veh/h	8	234	240	568	0	494	129	0	596	37	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1791	1721	0	1857	1793	0	1351	1778	0	0
Q Serve(g_s), s	0.3	7.1	7.1	10.2	0.0	12.1	3.9	0.0	10.5	1.3	0.0	0.0
Cycle Q Clear(g_c), s	0.3	7.1	7.1	10.2	0.0	12.1	3.9	0.0	10.5	1.3	0.0	0.0
Prop In Lane	1.00		0.20	1.00		0.02	0.78		1.00	0.08		0.19
Lane Grp Cap(c), veh/h	11	505	512	705	0	899	402	0	1176	68	0	0
V/C Ratio(X)	0.73	0.46	0.47	0.81	0.00	0.55	0.32	0.00	0.51	0.54	0.00	0.00
Avail Cap(c_a), veh/h	548	957	969	1862	0	1004	693	0	1615	687	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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	32.1	19.0	19.1	24.5	0.0	11.7	21.0	0.0	13.5	30.6	0.0	0.0
Incr Delay (d2), s/veh	28.2	0.9	1.0	0.8	0.0	0.7	0.2	0.0	0.1	6.6	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	0.2	3.6	3.7	4.9	0.0	6.4	2.0	0.0	3.9	0.8	0.0	0.0
LnGrp Delay(d),s/veh	60.3	20.0	20.0	25.3	0.0	12.5	21.2	0.0	13.7	37.2	0.0	0.0
LnGrp LOS	E	B	C	C		B	C		B	D		
Approach Vol, veh/h		482			1062			725			37	
Approach Delay, s/veh		20.7			19.4			15.0			37.2	
Approach LOS		C			B			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.2	22.5		6.5	4.4	35.3		18.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	35.0	35.0		25.0	20.0	35.0		25.0
Max Q Clear Time (g_c+I1), s	12.2	9.1		3.3	2.3	14.1		12.5
Green Ext Time (p_c), s	1.1	9.3		0.1	0.0	8.5		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	860	9	15	823	21	0	0	0	23	4	129
Future Volume (veh/h)	82	860	9	15	823	21	0	0	0	23	4	129
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97				1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	85	896	9	16	904	23				45	8	253
Adj No. of Lanes	1	2	0	1	2	0				0	1	0
Peak Hour Factor	0.96	0.96	0.96	0.91	0.91	0.91				0.51	0.51	0.51
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	110	1958	20	21	1745	44				58	10	328
Arrive On Green	0.06	0.55	0.55	0.01	0.50	0.50				0.25	0.25	0.25
Sat Flow, veh/h	1774	3589	36	1774	3524	90				231	41	1298
Grp Volume(v), veh/h	85	442	463	16	454	473				306	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1855	1774	1770	1844				1570	0	0
Q Serve(g_s), s	3.0	9.6	9.6	0.6	11.0	11.0				11.4	0.0	0.0
Cycle Q Clear(g_c), s	3.0	9.6	9.6	0.6	11.0	11.0				11.4	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.05				0.15		0.83
Lane Grp Cap(c), veh/h	110	966	1012	21	876	913				397	0	0
V/C Ratio(X)	0.77	0.46	0.46	0.78	0.52	0.52				0.77	0.00	0.00
Avail Cap(c_a), veh/h	561	1119	1173	561	1119	1166				546	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	29.2	8.7	8.7	31.2	10.8	10.8				21.9	0.0	0.0
Incr Delay (d2), s/veh	4.3	0.5	0.5	20.2	0.7	0.7				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
%ile BackOfQ(50%),veh/ln	1.6	4.8	5.0	0.4	5.5	5.7				5.2	0.0	0.0
LnGrp Delay(d),s/veh	33.5	9.2	9.2	51.4	11.5	11.5				24.8	0.0	0.0
LnGrp LOS	C	A	A	D	B	B				C		
Approach Vol, veh/h		990			943						306	
Approach Delay, s/veh		11.3			12.2						24.8	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	4.7	38.5		20.0	7.9	35.3		
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s	20.0	40.0		22.0	20.0	40.0		
Max Q Clear Time (g_c+I1), s	2.6	11.6		13.4	5.0	13.0		
Green Ext Time (p_c), s	0.0	19.0		0.9	0.1	18.3		

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
3: McCauley Rd/Green Valley Rd & Diablo Rd

Timing Plan: School PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	396	439	90	16	453	268	67	37	31	318	27	288
Future Volume (veh/h)	396	439	90	16	453	268	67	37	31	318	27	288
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.94	1.00		1.00	1.00		0.96
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	404	448	92	17	487	288	129	71	60	388	33	351
Adj No. of Lanes	1	1	0	1	2	1	1	1	0	0	1	1
Peak Hour Factor	0.98	0.98	0.98	0.93	0.93	0.93	0.52	0.52	0.52	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	452	676	139	20	741	724	180	95	80	429	36	802
Arrive On Green	0.25	0.45	0.45	0.01	0.21	0.21	0.10	0.10	0.10	0.26	0.26	0.26
Sat Flow, veh/h	1774	1493	307	1774	3539	1482	1774	932	787	1641	140	1525
Grp Volume(v), veh/h	404	0	540	17	487	288	129	0	131	421	0	351
Grp Sat Flow(s),veh/h/ln	1774	0	1799	1774	1770	1482	1774	0	1719	1781	0	1525
Q Serve(g_s), s	20.3	0.0	21.7	0.9	11.7	11.8	6.5	0.0	6.9	21.2	0.0	13.4
Cycle Q Clear(g_c), s	20.3	0.0	21.7	0.9	11.7	11.8	6.5	0.0	6.9	21.2	0.0	13.4
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.46	0.92		1.00
Lane Grp Cap(c), veh/h	452	0	815	20	741	724	180	0	175	465	0	802
V/C Ratio(X)	0.89	0.00	0.66	0.83	0.66	0.40	0.72	0.00	0.75	0.91	0.00	0.44
Avail Cap(c_a), veh/h	576	0	815	384	1340	974	403	0	390	481	0	816
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.2	0.0	19.8	45.6	33.5	16.1	40.2	0.0	40.4	33.1	0.0	14.1
Incr Delay (d2), s/veh	14.9	0.0	2.1	26.4	1.2	0.4	2.0	0.0	2.4	20.6	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	0.0	11.1	0.6	5.8	7.3	3.3	0.0	3.4	13.1	0.0	5.7
LnGrp Delay(d),s/veh	48.2	0.0	21.9	72.1	34.7	16.5	42.2	0.0	42.8	53.7	0.0	14.6
LnGrp LOS	D		C	E	C	B	D		D	D		B
Approach Vol, veh/h		944			792			260			772	
Approach Delay, s/veh		33.2			28.9			42.5			35.9	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.1	45.9		28.1	27.6	23.4		13.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	20.0	30.0		25.0	30.0	35.0		21.0
Max Q Clear Time (g_c+I1), s	2.9	23.7		23.2	22.3	13.8		8.9
Green Ext Time (p_c), s	0.0	4.2		1.0	1.3	5.5		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	33.6
HCM 2010 LOS	C

Notes

User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	47	55	47	632	565	73
Future Volume (vph)	47	55	47	632	565	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.96	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1701	1583	1770	1863	1827	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1701	1583	1770	1863	1827	
Peak-hour factor, PHF	0.55	0.55	0.93	0.93	0.79	0.79
Adj. Flow (vph)	85	100	51	680	715	92
RTOR Reduction (vph)	0	89	0	0	2	0
Lane Group Flow (vph)	85	11	51	680	805	0
Confl. Peds. (#/hr)	16					5
Confl. Bikes (#/hr)						1
Turn Type	Perm	Perm	Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases	4	4				
Actuated Green, G (s)	9.2	9.2	4.3	52.1	43.8	
Effective Green, g (s)	9.2	9.2	4.3	52.1	43.8	
Actuated g/C Ratio	0.11	0.11	0.05	0.64	0.53	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	1.8	1.8	1.8	3.0	3.0	
Lane Grp Cap (vph)	191	177	92	1185	977	
v/s Ratio Prot			0.03	c0.37	c0.44	
v/s Ratio Perm	c0.05	0.01				
v/c Ratio	0.45	0.06	0.55	0.57	0.82	
Uniform Delay, d1	34.0	32.5	37.9	8.5	15.8	
Progression Factor	1.00	1.00	1.00	1.00	0.48	
Incremental Delay, d2	0.6	0.1	4.1	0.7	4.2	
Delay (s)	34.6	32.6	41.9	9.2	11.8	
Level of Service	C	C	D	A	B	
Approach Delay (s)	33.5			11.5	11.8	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	81.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	89	17	588	91	20	549
Future Volume (vph)	89	17	588	91	20	549
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	1.00			1.00
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	0.98	1.00	1.00			1.00
Frt	1.00	0.85	0.98			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1727	1583	1829			1860
Flt Permitted	0.95	1.00	1.00			0.97
Satd. Flow (perm)	1727	1583	1829			1801
Peak-hour factor, PHF	0.88	0.88	0.93	0.93	0.79	0.79
Adj. Flow (vph)	101	19	632	98	25	695
RTOR Reduction (vph)	0	17	4	0	0	0
Lane Group Flow (vph)	101	2	726	0	0	720
Confl. Peds. (#/hr)	10					
Turn Type	Perm	Perm	NA		Perm	NA
Protected Phases			2			6
Permitted Phases	3	3			6	
Actuated Green, G (s)	8.6	8.6	52.1			43.8
Effective Green, g (s)	8.6	8.6	52.1			43.8
Actuated g/C Ratio	0.11	0.11	0.64			0.53
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	2.1	2.1	3.0			3.0
Lane Grp Cap (vph)	181	166	1163			963
v/s Ratio Prot			c0.40			
v/s Ratio Perm	c0.06	0.00				c0.40
v/c Ratio	0.56	0.01	0.62			0.75
Uniform Delay, d1	34.8	32.8	9.0			14.8
Progression Factor	1.00	1.00	0.27			1.00
Incremental Delay, d2	2.3	0.0	1.0			3.2
Delay (s)	37.1	32.9	3.4			18.0
Level of Service	D	C	A			B
Approach Delay (s)	36.5		3.4			18.0
Approach LOS	D		A			B

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	81.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	102.4
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	31	95	510	0	63	94	1	0	485	18	92
Future Vol, veh/h	0	31	95	510	0	63	94	1	0	485	18	92
Peak Hour Factor	0.92	0.69	0.69	0.69	0.92	0.88	0.88	0.88	0.92	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	45	138	739	0	72	107	1	0	564	21	107
Number of Lanes	0	1	1	1	0	1	2	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	3
HCM Control Delay	184.3	14.5	24.9
HCM LOS	F	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	93%	0%	100%	0%	0%	100%	0%	0%	15%	0%
Vol Thru, %	0%	7%	0%	0%	100%	0%	0%	100%	97%	85%	0%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	3%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	252	251	92	31	95	510	63	63	32	13	31
LT Vol	252	233	0	31	0	0	63	0	0	2	0
Through Vol	0	18	0	0	95	0	0	63	31	11	0
RT Vol	0	0	92	0	0	510	0	0	1	0	31
Lane Flow Rate	293	292	107	45	138	739	72	71	37	20	48
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.664	0.657	0.207	0.102	0.294	1.435	0.187	0.176	0.091	0.051	0.113
Departure Headway (Hd)	8.844	8.808	7.637	8.205	7.698	6.988	10.143	9.63	9.608	9.993	9.216
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	411	414	473	435	465	517	356	375	375	361	392
Service Time	6.544	6.508	5.337	5.984	5.477	4.766	7.843	7.33	7.308	7.693	6.916
HCM Lane V/C Ratio	0.713	0.705	0.226	0.103	0.297	1.429	0.202	0.189	0.099	0.055	0.122
HCM Control Delay	27.4	26.9	12.3	11.9	13.7	226.6	15.2	14.4	13.3	13.2	13.1
HCM Lane LOS	D	D	B	B	B	F	C	B	B	B	B
HCM 95th-tile Q	4.7	4.6	0.8	0.3	1.2	35.4	0.7	0.6	0.3	0.2	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↰	↱
Traffic Vol, veh/h	0	2	11	31
Future Vol, veh/h	0	2	11	31
Peak Hour Factor	0.92	0.65	0.65	0.65
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	3	17	48
Number of Lanes	0	0	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	13.1
HCM LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	274	43	76	497	7	135	3	90	97	15	47
Future Volume (veh/h)	10	274	43	76	497	7	135	3	90	97	15	47
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.78	1.00		0.68	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	12	330	52	90	592	8	229	5	153	249	38	121
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.83	0.83	0.83	0.84	0.84	0.84	0.59	0.59	0.59	0.39	0.39	0.39
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	15	596	492	116	702	466	270	10	292	286	112	357
Arrive On Green	0.01	0.32	0.32	0.07	0.38	0.38	0.15	0.28	0.28	0.16	0.29	0.29
Sat Flow, veh/h	1774	1863	1538	1774	1863	1238	1774	34	1055	1774	392	1250
Grp Volume(v), veh/h	12	330	52	90	592	8	229	0	158	249	0	159
Grp Sat Flow(s),veh/h/ln	1774	1863	1538	1774	1863	1238	1774	0	1089	1774	0	1642
Q Serve(g_s), s	0.6	13.7	2.2	4.7	27.1	0.4	11.7	0.0	11.5	12.8	0.0	7.1
Cycle Q Clear(g_c), s	0.6	13.7	2.2	4.7	27.1	0.4	11.7	0.0	11.5	12.8	0.0	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.76
Lane Grp Cap(c), veh/h	15	596	492	116	702	466	270	0	302	286	0	470
V/C Ratio(X)	0.79	0.55	0.11	0.77	0.84	0.02	0.85	0.00	0.52	0.87	0.00	0.34
Avail Cap(c_a), veh/h	570	798	659	570	798	530	475	0	350	475	0	528
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.2	26.3	22.4	43.0	26.6	18.3	38.6	0.0	28.6	38.2	0.0	26.4
Incr Delay (d2), s/veh	27.3	1.1	0.1	4.1	8.0	0.0	7.3	0.0	1.4	4.9	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	7.2	1.0	2.4	15.4	0.1	6.3	0.0	3.5	6.7	0.0	3.2
LnGrp Delay(d),s/veh	73.5	27.4	22.5	47.1	34.6	18.3	45.9	0.0	30.0	43.1	0.0	26.5
LnGrp LOS	E	C	C	D	C	B	D		C	D		C
Approach Vol, veh/h		394			690			387			408	
Approach Delay, s/veh		28.2			36.0			39.4			36.7	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	34.4	19.0	29.9	4.8	39.7	18.2	30.7
Change Period (Y+Rc), s	4.0	4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	30.0	40.0	25.0	30.0	30.0	40.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	6.7	15.7	14.8	13.5	2.6	29.1	13.7	9.1
Green Ext Time (p_c), s	0.1	9.9	0.3	1.9	0.0	6.1	0.5	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.2
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	66
Intersection LOS	F

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Lane Configurations									
Traffic Vol, veh/h	0	101	556	0	415	41	0	69	182
Future Vol, veh/h	0	101	556	0	415	41	0	69	182
Peak Hour Factor	0.92	0.86	0.86	0.92	0.90	0.90	0.92	0.73	0.73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	117	647	0	461	46	0	95	249
Number of Lanes	0	1	1	0	1	0	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	104.6	42.2	15.4
HCM LOS	F	E	C

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	91%	0%	0%
Vol Right, %	0%	0%	9%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	556	456	69	182
LT Vol	101	0	0	69	0
Through Vol	0	556	415	0	0
RT Vol	0	0	41	0	182
Lane Flow Rate	117	647	507	95	249
Geometry Grp	7	7	4	7	7
Degree of Util (X)	0.231	1.18	0.89	0.211	0.47
Departure Headway (Hd)	7.082	6.571	6.67	8.415	7.176
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	510	556	547	429	506
Service Time	4.782	4.271	4.67	6.115	4.876
HCM Lane V/C Ratio	0.229	1.164	0.927	0.221	0.492
HCM Control Delay	11.9	121.4	42.2	13.4	16.1
HCM Lane LOS	B	F	E	B	C
HCM 95th-tile Q	0.9	22.9	10.2	0.8	2.5

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	34	390	35	40	46	0	0	45	24
Future Vol, veh/h	0	0	0	34	390	35	40	46	0	0	45	24
Conflicting Peds, #/hr	0	0	0	1	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	82	82	82	77	77	77	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	41	476	43	52	60	0	0	63	33

Major/Minor	Major2			Minor1		Minor2			
Conflicting Flow All	1	0	0	629	602	-	-	581	497
Stage 1	-	-	-	1	1	-	-	580	-
Stage 2	-	-	-	628	601	-	-	1	-
Critical Hdwy	4.12	-	-	7.12	6.52	-	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-	-	-	-
Follow-up Hdwy	2.218	-	-	3.518	4.018	-	-	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	395	414	0	0	425	573
Stage 1	-	-	-	-	-	0	0	500	-
Stage 2	-	-	-	471	489	0	0	-	-
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	1622	-	-	319	399	-	-	409	573
Mov Cap-2 Maneuver	-	-	-	319	399	-	-	409	-
Stage 1	-	-	-	-	-	-	-	482	-
Stage 2	-	-	-	372	471	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0.5	16.9	15
HCM LOS		C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	319	399	1622	-	-	454
HCM Lane V/C Ratio	0.163	0.15	0.026	-	-	0.211
HCM Control Delay (s)	18.5	15.6	7.3	0	-	15
HCM Lane LOS	C	C	A	A	-	C
HCM 95th %tile Q(veh)	0.6	0.5	0.1	-	-	0.8

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	46	477	66	0	0	0	0	40	40	43	36	0
Future Vol, veh/h	46	477	66	0	0	0	0	40	40	43	36	0
Conflicting Peds, #/hr	0	0	1	0	0	0	0	0	2	2	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	85	-	100	0	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	92	92	92	77	77	77	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	55	568	79	0	0	0	0	52	52	60	50	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	0	0	0	-	718	610	745	757	-
Stage 1	-	-	-	-	718	-	0	0	-
Stage 2	-	-	-	-	0	-	745	757	-
Critical Hdwy	4.12	-	-	-	6.52	6.22	7.12	6.52	-
Critical Hdwy Stg 1	-	-	-	-	5.52	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	-	4.018	3.318	3.518	4.018	-
Pot Cap-1 Maneuver	-	-	-	0	355	494	330	337	0
Stage 1	-	-	-	0	433	-	-	-	0
Stage 2	-	-	-	0	-	-	406	416	0
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	-	355	494	262	337	-
Mov Cap-2 Maneuver	-	-	-	-	355	-	262	337	-
Stage 1	-	-	-	-	433	-	-	-	-
Stage 2	-	-	-	-	-	-	320	416	-

Approach	EB	NB	SB
HCM Control Delay, s		14.5	20.4
HCM LOS		B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	SBLn1	SBLn2
Capacity (veh/h)	355	355	494	-	-	-	262	337
HCM Lane V/C Ratio	0.073	0.073	0.105	-	-	-	0.228	0.148
HCM Control Delay (s)	15.9	15.9	13.1	-	-	-	22.8	17.5
HCM Lane LOS	C	C	B	-	-	-	C	C
HCM 95th %tile Q(veh)	0.2	0.2	0.4	-	-	-	0.9	0.5

Intersection	
Intersection Delay, s/veh	15.4
Intersection LOS	C

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations									
Traffic Vol, veh/h	0	219	136	0	352	325	0	127	0
Future Vol, veh/h	0	219	136	0	352	325	0	127	0
Peak Hour Factor	0.92	0.94	0.94	0.92	0.92	0.92	0.92	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	233	145	0	383	353	0	153	0
Number of Lanes	0	1	1	0	1	2	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	14.8	15.8	14.7
HCM LOS	B	C	B

Lane	NBLn1	NBLn2	NBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	352	163	163	219	136	127	0
LT Vol	0	0	0	219	0	127	0
Through Vol	352	0	0	0	0	0	0
RT Vol	0	163	163	0	136	0	0
Lane Flow Rate	383	177	177	233	145	153	0
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.68	0.279	0.193	0.483	0.251	0.336	0
Departure Headway (Hd)	6.397	5.687	3.929	7.467	6.255	7.898	7.387
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	562	629	903	482	571	453	0
Service Time	4.165	3.455	1.697	5.237	4.025	5.69	5.177
HCM Lane V/C Ratio	0.681	0.281	0.196	0.483	0.254	0.338	0
HCM Control Delay	21.8	10.7	7.7	17.1	11.1	14.7	10.2
HCM Lane LOS	C	B	A	C	B	B	N
HCM 95th-tile Q	5.2	1.1	0.7	2.6	1	1.5	0

HCM Signalized Intersection Capacity Analysis
10: Crow Canyon Rd/Blackhawk Rd & Camino Tassajara

Timing Plan: School PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	652	264	392	495	243	385	508	412	309	392	182
Future Volume (vph)	212	652	264	392	495	243	385	508	412	309	392	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Lane Util. Factor	0.97	0.95	1.00	0.94	0.95		0.97	0.91	0.91	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.97	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1559	4990	3348		3433	3274	1417	3433	3539	1559
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1559	4990	3348		3433	3274	1417	3433	3539	1559
Peak-hour factor, PHF	0.88	0.88	0.88	0.87	0.87	0.87	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	241	741	300	451	569	279	418	552	448	355	451	209
RTOR Reduction (vph)	0	0	202	0	38	0	0	14	221	0	0	156
Lane Group Flow (vph)	241	741	98	451	810	0	418	681	84	355	451	53
Confl. Peds. (#/hr)						3			5			2
Confl. Bikes (#/hr)			4									2
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	12.4	30.1	30.1	14.7	32.4		18.1	31.1	31.1	16.1	28.7	28.7
Effective Green, g (s)	12.4	30.1	30.1	14.7	32.4		18.1	31.1	31.1	16.1	28.7	28.7
Actuated g/C Ratio	0.11	0.27	0.27	0.13	0.29		0.16	0.28	0.28	0.14	0.26	0.26
Clearance Time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	378	947	417	652	965		552	905	392	491	903	398
v/s Ratio Prot	0.07	c0.21		0.09	c0.24		c0.12	c0.21		0.10	0.13	
v/s Ratio Perm			0.06						0.06			0.03
v/c Ratio	0.64	0.78	0.23	0.69	0.84		0.76	0.75	0.22	0.72	0.50	0.13
Uniform Delay, d1	47.8	38.1	32.2	46.7	37.6		45.1	37.1	31.3	46.0	35.7	32.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.6	4.5	0.4	2.6	6.8		5.2	3.8	0.4	4.4	0.6	0.2
Delay (s)	50.4	42.6	32.5	49.3	44.3		50.3	40.9	31.6	50.5	36.3	32.5
Level of Service	D	D	C	D	D		D	D	C	D	D	C
Approach Delay (s)		41.7			46.0			41.7			40.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	112.4	Sum of lost time (s)	20.8
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM 2010 Signalized Intersection Summary
1: Diablo Rd & El Cerro Blvd & Ackerman Dr

Timing Plan: PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	333	58	440	260	2	63	26	686	7	16	6
Future Volume (veh/h)	2	333	58	440	260	2	63	26	686	7	16	6
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.97
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	2	378	66	489	289	2	71	29	771	12	27	10
Adj No. of Lanes	1	2	0	2	1	0	0	1	2	0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.90	0.90	0.90	0.89	0.89	0.89	0.60	0.60	0.60
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	756	131	621	795	6	355	145	1264	19	44	16
Arrive On Green	0.00	0.25	0.25	0.18	0.43	0.43	0.28	0.28	0.28	0.04	0.04	0.04
Sat Flow, veh/h	1774	3004	519	3442	1847	13	1277	522	2742	432	972	360
Grp Volume(v), veh/h	2	221	223	489	0	291	100	0	771	49	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1753	1721	0	1860	1799	0	1371	1763	0	0
Q Serve(g_s), s	0.1	7.0	7.1	8.8	0.0	6.9	2.8	0.0	13.8	1.8	0.0	0.0
Cycle Q Clear(g_c), s	0.1	7.0	7.1	8.8	0.0	6.9	2.8	0.0	13.8	1.8	0.0	0.0
Prop In Lane	1.00		0.30	1.00		0.01	0.71		1.00	0.24		0.20
Lane Grp Cap(c), veh/h	3	445	441	621	0	800	500	0	1264	79	0	0
V/C Ratio(X)	0.69	0.50	0.51	0.79	0.00	0.36	0.20	0.00	0.61	0.62	0.00	0.00
Avail Cap(c_a), veh/h	544	950	941	1848	0	999	690	0	1554	676	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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	32.5	20.9	20.9	25.5	0.0	12.5	18.0	0.0	13.3	30.6	0.0	0.0
Incr Delay (d2), s/veh	72.3	1.2	1.3	0.9	0.0	0.4	0.1	0.0	0.2	7.7	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	0.1	3.5	3.6	4.3	0.0	3.6	1.4	0.0	5.2	1.0	0.0	0.0
LnGrp Delay(d),s/veh	104.9	22.1	22.2	26.4	0.0	12.9	18.1	0.0	13.5	38.3	0.0	0.0
LnGrp LOS	F	C	C	C		B	B		B	D		
Approach Vol, veh/h		446			780			871			49	
Approach Delay, s/veh		22.5			21.4			14.0			38.3	
Approach LOS		C			C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.8	20.4		6.9	4.1	32.1		22.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	35.0	35.0		25.0	20.0	35.0		25.0
Max Q Clear Time (g_c+I1), s	10.8	9.1		3.8	2.1	8.9		15.8
Green Ext Time (p_c), s	0.9	6.7		0.2	0.0	6.7		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	19.0
HCM 2010 LOS	B

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	920	11	10	615	9	0	0	0	17	0	35
Future Volume (veh/h)	57	920	11	10	615	9	0	0	0	17	0	35
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97				1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	63	1022	12	11	676	10				21	0	43
Adj No. of Lanes	1	2	0	1	2	0				0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91				0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	78	2310	27	15	2176	32				34	0	70
Arrive On Green	0.04	0.64	0.64	0.01	0.61	0.61				0.06	0.00	0.06
Sat Flow, veh/h	1774	3582	42	1774	3569	53				529	0	1083
Grp Volume(v), veh/h	63	505	529	11	335	351				64	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1854	1774	1770	1852				1612	0	0
Q Serve(g_s), s	1.5	6.0	6.0	0.3	3.9	3.9				1.6	0.0	0.0
Cycle Q Clear(g_c), s	1.5	6.0	6.0	0.3	3.9	3.9				1.6	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.03				0.33		0.67
Lane Grp Cap(c), veh/h	78	1141	1196	15	1079	1129				104	0	0
V/C Ratio(X)	0.81	0.44	0.44	0.72	0.31	0.31				0.62	0.00	0.00
Avail Cap(c_a), veh/h	834	1664	1744	834	1664	1741				834	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	20.2	3.8	3.8	21.0	4.0	4.0				19.4	0.0	0.0
Incr Delay (d2), s/veh	7.3	0.4	0.4	21.0	0.2	0.2				2.2	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
%ile BackOfQ(50%),veh/ln	0.9	2.9	3.1	0.2	1.9	2.0				0.8	0.0	0.0
LnGrp Delay(d),s/veh	27.5	4.1	4.1	42.0	4.2	4.2				21.6	0.0	0.0
LnGrp LOS	C	A	A	D	A	A				C		
Approach Vol, veh/h		1097			697						64	
Approach Delay, s/veh		5.5			4.8						21.6	
Approach LOS		A			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	4.4	31.4		6.7	5.9	29.9		
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s	20.0	40.0		22.0	20.0	40.0		
Max Q Clear Time (g_c+I1), s	2.3	8.0		3.6	3.5	5.9		
Green Ext Time (p_c), s	0.0	19.3		0.2	0.1	20.1		

Intersection Summary	
HCM 2010 Ctrl Delay	5.8
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
3: McCauley Rd/Green Valley Rd & Diablo Rd

Timing Plan: PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	538	337	65	14	326	370	50	24	8	177	11	231
Future Volume (veh/h)	538	337	65	14	326	370	50	24	8	177	11	231
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.93	1.00		1.00	1.00		0.99
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	598	374	72	15	354	402	59	28	9	216	13	282
Adj No. of Lanes	1	1	0	1	2	1	1	1	0	0	1	1
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.85	0.85	0.85	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	646	944	182	18	954	676	87	66	21	294	18	852
Arrive On Green	0.36	0.62	0.62	0.01	0.27	0.27	0.05	0.05	0.05	0.18	0.18	0.18
Sat Flow, veh/h	1774	1513	291	1774	3539	1480	1774	1352	434	1678	101	1572
Grp Volume(v), veh/h	598	0	446	15	354	402	59	0	37	229	0	282
Grp Sat Flow(s),veh/h/ln	1774	0	1804	1774	1770	1480	1774	0	1786	1779	0	1572
Q Serve(g_s), s	36.4	0.0	13.9	1.0	9.1	23.3	3.7	0.0	2.3	13.7	0.0	11.3
Cycle Q Clear(g_c), s	36.4	0.0	13.9	1.0	9.1	23.3	3.7	0.0	2.3	13.7	0.0	11.3
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.24	0.94		1.00
Lane Grp Cap(c), veh/h	646	0	1125	18	954	676	87	0	87	311	0	852
V/C Ratio(X)	0.93	0.00	0.40	0.85	0.37	0.59	0.68	0.00	0.42	0.74	0.00	0.33
Avail Cap(c_a), veh/h	788	0	1125	236	1415	869	394	0	397	790	0	1275
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.3	0.0	10.6	55.6	33.4	23.8	52.7	0.0	52.0	44.0	0.0	14.5
Incr Delay (d2), s/veh	15.6	0.0	0.3	31.2	0.3	1.0	3.4	0.0	1.2	4.8	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.6	0.0	6.9	0.6	4.5	12.6	1.9	0.0	1.1	7.2	0.0	5.0
LnGrp Delay(d),s/veh	49.9	0.0	10.9	86.8	33.7	24.9	56.1	0.0	53.2	48.7	0.0	14.9
LnGrp LOS	D		B	F	C	C	E		D	D		B
Approach Vol, veh/h		1044			771			96			511	
Approach Delay, s/veh		33.2			30.1			55.0			30.0	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.1	74.2		23.7	45.0	34.3		9.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	15.0	40.0		50.0	50.0	45.0		25.0
Max Q Clear Time (g_c+I1), s	3.0	15.9		15.7	38.4	25.3		5.7
Green Ext Time (p_c), s	0.0	8.8		3.9	2.6	5.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	32.4
HCM 2010 LOS	C

Notes

User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	28	21	32	915	414	29
Future Volume (vph)	28	21	32	915	414	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1761	1583	1770	1863	1842	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1761	1583	1770	1863	1842	
Peak-hour factor, PHF	0.72	0.72	0.91	0.91	0.88	0.88
Adj. Flow (vph)	39	29	35	1005	470	33
RTOR Reduction (vph)	0	27	0	0	1	0
Lane Group Flow (vph)	39	2	35	1005	502	0
Confl. Peds. (#/hr)	2					6
Confl. Bikes (#/hr)						1
Turn Type	Perm	Perm	Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases	4	4				
Actuated Green, G (s)	5.2	5.2	3.7	54.8	47.1	
Effective Green, g (s)	5.2	5.2	3.7	54.8	47.1	
Actuated g/C Ratio	0.07	0.07	0.05	0.70	0.60	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	1.8	1.8	1.8	3.0	3.0	
Lane Grp Cap (vph)	116	104	83	1300	1105	
v/s Ratio Prot			0.02	c0.54	0.27	
v/s Ratio Perm	c0.02	0.00				
v/c Ratio	0.34	0.02	0.42	0.77	0.45	
Uniform Delay, d1	35.0	34.3	36.4	7.8	8.6	
Progression Factor	1.00	1.00	1.00	1.00	0.45	
Incremental Delay, d2	0.6	0.0	1.3	2.9	0.3	
Delay (s)	35.6	34.3	37.6	10.7	4.2	
Level of Service	D	C	D	B	A	
Approach Delay (s)	35.1			11.6	4.2	
Approach LOS	D			B	A	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	78.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	57	19	854	89	26	386
Future Volume (vph)	57	19	854	89	26	386
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	1.00			1.00
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	0.99			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1770	1583	1835			1857
Flt Permitted	0.95	1.00	1.00			0.91
Satd. Flow (perm)	1770	1583	1835			1697
Peak-hour factor, PHF	0.76	0.76	0.91	0.91	0.88	0.88
Adj. Flow (vph)	75	25	938	98	30	439
RTOR Reduction (vph)	0	23	2	0	0	0
Lane Group Flow (vph)	75	2	1034	0	0	469
Confl. Bikes (#/hr)				2		
Turn Type	Perm	Perm	NA		Perm	NA
Protected Phases			2			6
Permitted Phases	3	3			6	
Actuated Green, G (s)	6.5	6.5	54.8			47.1
Effective Green, g (s)	6.5	6.5	54.8			47.1
Actuated g/C Ratio	0.08	0.08	0.70			0.60
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	2.1	2.1	3.0			3.0
Lane Grp Cap (vph)	146	131	1280			1018
v/s Ratio Prot			c0.56			
v/s Ratio Perm	c0.04	0.00				0.28
v/c Ratio	0.51	0.02	0.81			0.46
Uniform Delay, d1	34.5	33.1	8.2			8.7
Progression Factor	1.00	1.00	0.25			1.00
Incremental Delay, d2	1.5	0.0	3.3			0.3
Delay (s)	36.0	33.1	5.3			9.0
Level of Service	D	C	A			A
Approach Delay (s)	35.2		5.3			9.0
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	78.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	37.1
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	18	82	338	0	79	63	3	0	758	18	78
Future Vol, veh/h	0	18	82	338	0	79	63	3	0	758	18	78
Peak Hour Factor	0.92	0.87	0.87	0.87	0.92	0.72	0.72	0.72	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	21	94	389	0	110	88	4	0	824	20	85
Number of Lanes	0	1	1	1	0	1	2	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	3
HCM Control Delay	29.7	14.6	47.3
HCM LOS	D	B	E

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	95%	0%	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	0%	5%	0%	0%	100%	0%	0%	100%	88%	100%	0%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	12%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	387	389	78	18	82	338	79	42	24	8	23
LT Vol	387	371	0	18	0	0	79	0	0	0	0
Through Vol	0	18	0	0	82	0	0	42	21	8	0
RT Vol	0	0	78	0	0	338	0	0	3	0	23
Lane Flow Rate	420	423	85	21	94	389	110	58	33	13	38
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.911	0.915	0.156	0.05	0.214	0.807	0.289	0.145	0.082	0.034	0.091
Departure Headway (Hd)	7.809	7.786	6.605	8.693	8.185	7.474	9.467	8.956	8.867	9.288	8.588
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	466	466	543	412	438	486	380	400	404	385	416
Service Time	5.559	5.535	4.354	6.44	5.933	5.222	7.233	6.722	6.633	7.068	6.368
HCM Lane V/C Ratio	0.901	0.908	0.157	0.051	0.215	0.8	0.289	0.145	0.082	0.034	0.091
HCM Control Delay	50.7	51.3	10.6	11.9	13.2	34.7	16.1	13.2	12.4	12.4	12.2
HCM Lane LOS	F	F	B	B	B	D	C	B	B	B	B
HCM 95th-tile Q	10.2	10.4	0.5	0.2	0.8	7.6	1.2	0.5	0.3	0.1	0.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↰	↱
Traffic Vol, veh/h	0	0	8	23
Future Vol, veh/h	0	0	8	23
Peak Hour Factor	0.92	0.60	0.60	0.60
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	0	13	38
Number of Lanes	0	0	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	12.3
HCM LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	275	45	123	734	1	52	6	121	18	0	8
Future Volume (veh/h)	1	275	45	123	734	1	52	6	121	18	0	8
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.95	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	1	293	48	129	773	1	88	10	205	44	0	20
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.59	0.59	0.59	0.41	0.41	0.41
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	768	634	167	941	776	116	16	318	55	0	294
Arrive On Green	0.00	0.41	0.41	0.09	0.51	0.51	0.07	0.22	0.22	0.03	0.00	0.19
Sat Flow, veh/h	1774	1863	1537	1774	1863	1535	1774	70	1444	1774	0	1583
Grp Volume(v), veh/h	1	293	48	129	773	1	88	0	215	44	0	20
Grp Sat Flow(s),veh/h/ln	1774	1863	1537	1774	1863	1535	1774	0	1514	1774	0	1583
Q Serve(g_s), s	0.0	7.5	1.3	4.8	23.9	0.0	3.3	0.0	8.8	1.7	0.0	0.7
Cycle Q Clear(g_c), s	0.0	7.5	1.3	4.8	23.9	0.0	3.3	0.0	8.8	1.7	0.0	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.95	1.00		1.00
Lane Grp Cap(c), veh/h	3	768	634	167	941	776	116	0	334	55	0	294
V/C Ratio(X)	0.38	0.38	0.08	0.77	0.82	0.00	0.76	0.00	0.64	0.80	0.00	0.07
Avail Cap(c_a), veh/h	782	1095	904	782	1095	903	652	0	668	652	0	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.0	13.9	12.1	30.1	14.2	8.3	31.2	0.0	24.1	32.8	0.0	22.8
Incr Delay (d2), s/veh	31.0	0.4	0.1	2.9	4.9	0.0	9.5	0.0	2.1	9.8	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	0.0	3.9	0.6	2.5	13.3	0.0	1.9	0.0	3.8	1.0	0.0	0.3
LnGrp Delay(d),s/veh	64.9	14.4	12.2	33.0	19.1	8.3	40.8	0.0	26.2	42.5	0.0	22.9
LnGrp LOS	E	B	B	C	B	A	D		C	D		C
Approach Vol, veh/h		342			903			303			64	
Approach Delay, s/veh		14.2			21.1			30.4			36.4	
Approach LOS		B			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	32.5	6.1	19.0	4.1	38.9	8.5	16.6
Change Period (Y+Rc), s	4.0	4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	30.0	40.0	25.0	30.0	30.0	40.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	6.8	9.5	3.7	10.8	2.0	25.9	5.3	2.7
Green Ext Time (p_c), s	0.2	13.6	0.0	1.4	0.0	8.5	0.2	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	22.0
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	22.5
Intersection LOS	C

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Lane Configurations									
Traffic Vol, veh/h	0	52	386	0	474	28	0	34	73
Future Vol, veh/h	0	52	386	0	474	28	0	34	73
Peak Hour Factor	0.92	0.82	0.82	0.92	0.94	0.94	0.92	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	63	471	0	504	30	0	43	92
Number of Lanes	0	1	1	0	1	0	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	20.3	27.6	10.7
HCM LOS	C	D	B

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	94%	0%	0%
Vol Right, %	0%	0%	6%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	52	386	502	34	73
LT Vol	52	0	0	34	0
Through Vol	0	386	474	0	0
RT Vol	0	0	28	0	73
Lane Flow Rate	63	471	534	43	92
Geometry Grp	7	7	4	7	7
Degree of Util (X)	0.107	0.728	0.81	0.092	0.166
Departure Headway (Hd)	6.078	5.571	5.46	7.676	6.449
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	590	650	662	467	556
Service Time	3.805	3.299	3.486	5.419	4.191
HCM Lane V/C Ratio	0.107	0.725	0.807	0.092	0.165
HCM Control Delay	9.5	21.8	27.6	11.2	10.5
HCM Lane LOS	A	C	D	B	B
HCM 95th-tile Q	0.4	6.2	8.3	0.3	0.6

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	58	446	44	30	37	0	0	22	22
Future Vol, veh/h	0	0	0	58	446	44	30	37	0	0	22	22
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	0	0	0	2
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	66	66	66	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	63	485	48	45	56	0	0	24	24

Major/Minor	Major2			Minor1		Minor2			
Conflicting Flow All	0	0	0	661	659	-	-	635	511
Stage 1	-	-	-	0	0	-	-	635	-
Stage 2	-	-	-	661	659	-	-	0	-
Critical Hdwy	4.12	-	-	7.12	6.52	-	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-	-	-	-
Follow-up Hdwy	2.218	-	-	3.518	4.018	-	-	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	376	384	0	0	396	563
Stage 1	-	-	-	-	-	0	0	472	-
Stage 2	-	-	-	452	461	0	0	-	-
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	343	384	-	-	396	563
Mov Cap-2 Maneuver	-	-	-	343	384	-	-	396	-
Stage 1	-	-	-	-	-	-	-	472	-
Stage 2	-	-	-	411	461	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		16.5	13.6
HCM LOS		C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	343	384	-	-	-	465
HCM Lane V/C Ratio	0.133	0.146	-	-	-	0.103
HCM Control Delay (s)	17.1	16	-	-	-	13.6
HCM Lane LOS	C	C	-	-	-	B
HCM 95th %tile Q(veh)	0.5	0.5	-	-	-	0.3

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	312	47	0	0	0	0	31	27	20	60	0
Future Vol, veh/h	36	312	47	0	0	0	0	31	27	20	60	0
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	3	3	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	85	-	100	0	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	92	92	92	66	66	66	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	380	57	0	0	0	0	47	41	22	65	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	0	0	0	-	499	414	523	528	-
Stage 1	-	-	-	-	499	-	0	0	-
Stage 2	-	-	-	-	0	-	523	528	-
Critical Hdwy	4.12	-	-	-	6.52	6.22	7.12	6.52	-
Critical Hdwy Stg 1	-	-	-	-	5.52	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	-	4.018	3.318	3.518	4.018	-
Pot Cap-1 Maneuver	-	-	-	0	473	638	465	456	0
Stage 1	-	-	-	0	544	-	-	-	0
Stage 2	-	-	-	0	-	-	537	528	0
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	-	472	637	402	455	-
Mov Cap-2 Maneuver	-	-	-	-	472	-	402	455	-
Stage 1	-	-	-	-	543	-	-	-	-
Stage 2	-	-	-	-	-	-	459	527	-

Approach	EB	NB	SB
HCM Control Delay, s		12.1	14.3
HCM LOS		B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	SBLn1	SBLn2
Capacity (veh/h)	472	472	637	-	-	-	402	455
HCM Lane V/C Ratio	0.05	0.05	0.064	-	-	-	0.054	0.143
HCM Control Delay (s)	13	13	11	-	-	-	14.5	14.2
HCM Lane LOS	B	B	B	-	-	-	B	B
HCM 95th %tile Q(veh)	0.2	0.2	0.2	-	-	-	0.2	0.5

Intersection	
Intersection Delay, s/veh	24.1
Intersection LOS	C

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations									
Traffic Vol, veh/h	0	214	75	0	502	307	0	81	0
Future Vol, veh/h	0	214	75	0	502	307	0	81	0
Peak Hour Factor	0.92	0.89	0.89	0.92	0.95	0.95	0.92	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	240	84	0	528	323	0	99	0
Number of Lanes	0	1	1	0	1	2	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	15.8	28.6	13
HCM LOS	C	D	B

Lane	NBLn1	NBLn2	NBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	502	154	154	214	75	81	0
LT Vol	0	0	0	214	0	81	0
Through Vol	502	0	0	0	0	0	0
RT Vol	0	154	154	0	75	0	0
Lane Flow Rate	528	162	162	240	84	99	0
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.898	0.243	0.164	0.503	0.148	0.219	0
Departure Headway (Hd)	6.118	5.41	3.656	7.535	6.325	7.995	7.483
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	592	661	973	478	565	446	0
Service Time	3.872	3.164	1.409	5.296	4.085	5.781	5.268
HCM Lane V/C Ratio	0.892	0.245	0.166	0.502	0.149	0.222	0
HCM Control Delay	40.9	9.9	7.1	17.7	10.2	13	10.3
HCM Lane LOS	E	A	A	C	B	B	N
HCM 95th-tile Q	10.8	0.9	0.6	2.8	0.5	0.8	0

HCM Signalized Intersection Capacity Analysis
10: Crow Canyon Rd/Blackhawk Rd & Camino Tassajara

Timing Plan: PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	219	654	256	384	489	308	417	566	494	249	333	177
Future Volume (vph)	219	654	256	384	489	308	417	566	494	249	333	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Lane Util. Factor	0.97	0.95	1.00	0.94	0.95		0.97	0.91	0.91	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	0.99	0.97	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.97	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1555	4990	3313		3433	3253	1401	3433	3539	1563
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1555	4990	3313		3433	3253	1401	3433	3539	1563
Peak-hour factor, PHF	0.89	0.89	0.89	0.88	0.88	0.88	0.91	0.91	0.91	0.98	0.98	0.98
Adj. Flow (vph)	246	735	288	436	556	350	458	622	543	254	340	181
RTOR Reduction (vph)	0	0	192	0	63	0	0	16	253	0	0	139
Lane Group Flow (vph)	246	735	96	436	843	0	458	791	105	254	340	42
Confl. Peds. (#/hr)			5			2			1			1
Confl. Bikes (#/hr)			2			3			19			
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	12.6	31.2	31.2	14.7	33.3		19.2	32.7	32.7	12.8	25.9	25.9
Effective Green, g (s)	12.6	31.2	31.2	14.7	33.3		19.2	32.7	32.7	12.8	25.9	25.9
Actuated g/C Ratio	0.11	0.28	0.28	0.13	0.30		0.17	0.29	0.29	0.11	0.23	0.23
Clearance Time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	386	987	433	656	986		589	951	409	393	819	362
v/s Ratio Prot	0.07	c0.21		0.09	c0.25		c0.13	c0.24		0.07	0.10	
v/s Ratio Perm			0.06						0.07			0.03
v/c Ratio	0.64	0.74	0.22	0.66	0.85		0.78	0.83	0.26	0.65	0.42	0.12
Uniform Delay, d1	47.4	36.7	31.0	46.2	37.0		44.3	37.0	30.2	47.3	36.5	33.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.5	3.3	0.4	2.0	7.6		5.9	6.5	0.5	2.7	0.5	0.2
Delay (s)	49.9	40.0	31.3	48.2	44.6		50.1	43.5	30.7	50.1	37.0	34.1
Level of Service	D	D	C	D	D		D	D	C	D	D	C
Approach Delay (s)		39.9			45.7			42.6			40.6	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	111.8	Sum of lost time (s)	20.8
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		

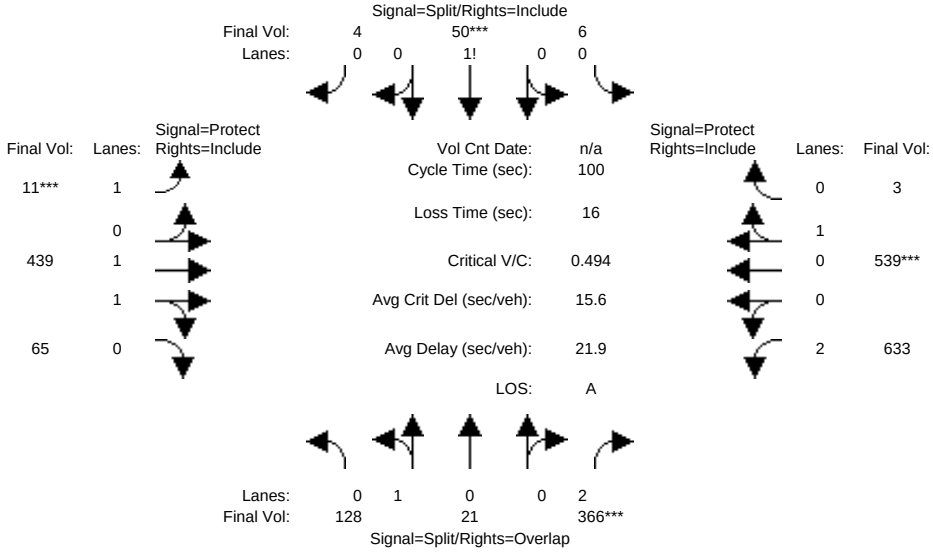
c Critical Lane Group

Appendix C LEVEL OF SERVICE WORKSHEETS: EXISTING PLUS PROJECT CONDITIONS

Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Ex+Proj AM

Intersection #1: Daiblo Rd and El Cerro Blvd



Street Name:	Diablo Road						El Cerro Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	100	16	557	4	35	3	9	360	53	563	480	3
Growth 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
Initial Bse:	100	16	557	4	35	3	9	360	53	563	480	3
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	100	16	557	4	35	3	9	360	53	563	480	3
User 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
PHF Adj:	0.78	0.78	0.78	0.70	0.70	0.70	0.82	0.82	0.82	0.89	0.89	0.89
PHF Volume:	128	21	714	6	50	4	11	439	65	633	539	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	21	714	6	50	4	11	439	65	633	539	3
RTOR Reduct:	0	0	348	0	0	0	0	0	0	0	0	0
RTOR Vol:	128	21	366	6	50	4	11	439	65	633	539	3
PCE 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
MLF 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
FinalVolume:	128	21	366	6	50	4	11	439	65	633	539	3
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	0.86	0.14	2.00	0.10	0.83	0.07	1.00	1.74	0.26	2.00	0.99	0.01
Final Sat.:	1422	228	3000	157	1375	118	1650	2877	423	3000	1640	10
Capacity Analysis Module:												
Vol/Sat:	0.09	0.09	0.12	0.04	0.04	0.04	0.01	0.15	0.15	0.21	0.33	0.33
Crit Moves:			****		****		****				****	
Green/Cycle:	0.18	0.18	0.51	0.10	0.10	0.10	0.07	0.23	0.23	0.32	0.49	0.49
Volume/Cap:	0.50	0.50	0.24	0.36	0.36	0.36	0.10	0.65	0.65	0.65	0.67	0.67
Delay/Veh:	29.6	35.4	10.7	38.0	33.1	39.5	33.5	28.2	35.9	23.4	16.6	107.3
Delay 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
AdjDel/Veh:	29.6	35.4	10.7	38.0	33.1	39.5	33.5	28.2	35.9	23.4	16.6	107.3
DesignQueue:	7	7	5	3	3	3	1	11	11	12	17	17

Note: Queue reported is the number of cars per lane.

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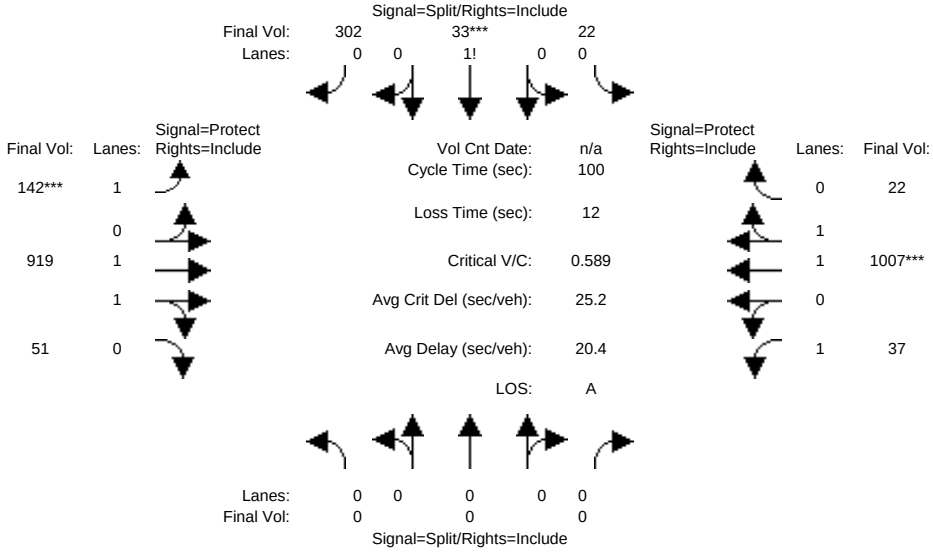
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Ex+Proj AM

Intersection #2: Matadera Wy and Diablo Rd



Street Name:	Metadera Way						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	10	15	139	118	763	42	32	866	19
Growth 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
Initial Bse:	0	0	0	10	15	139	118	763	42	32	866	19
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	10	15	139	118	763	42	32	866	19
User 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
PHF Adj:	1.00	1.00	1.00	0.46	0.46	0.46	0.83	0.83	0.83	0.86	0.86	0.86
PHF Volume:	0	0	0	22	33	302	142	919	51	37	1007	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	22	33	302	142	919	51	37	1007	22
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	22	33	302	142	919	51	37	1007	22
PCE 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
MLF 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
FinalVolume:	0	0	0	22	33	302	142	919	51	37	1007	22
Saturation Flow Module:												
Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.06	0.09	0.85	1.00	1.90	0.10	1.00	1.96	0.04
Final Sat.:	0	0	0	105	157	1458	1720	3261	179	1720	3366	74
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.21	0.21	0.21	0.08	0.28	0.28	0.02	0.30	0.30
Crit Moves:					****		****				****	
Green/Cycle:	0.00	0.00	0.00	0.31	0.31	0.31	0.12	0.46	0.46	0.11	0.45	0.45
Volume/Cap:	0.00	0.00	0.00	0.67	0.67	0.67	0.67	0.62	0.62	0.19	0.67	0.67
Delay/Veh:	0.0	0.0	0.0	48.9	42.0	25.8	37.6	16.4	24.6	31.0	17.6	42.3
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	48.9	42.0	25.8	37.6	16.4	24.6	31.0	17.6	42.3
DesignQueue:	0	0	0	14	14	14	7	16	16	2	17	17

Note: Queue reported is the number of cars per lane.

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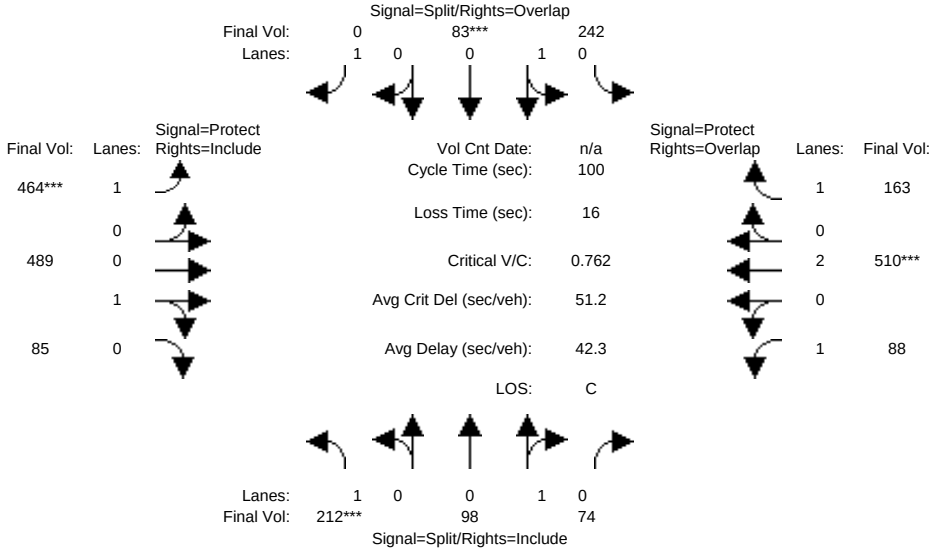
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Ex+Proj AM

Intersection #3: Green Valley Rd and Diablo Rd



Street Name:	Green Valeey Road						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	121	56	42	201	69	354	348	367	64	70	408	324
Growth 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
Initial Bse:	121	56	42	201	69	354	348	367	64	70	408	324
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	121	56	42	201	69	354	348	367	64	70	408	324
User 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
PHF Adj:	0.57	0.57	0.57	0.83	0.83	0.83	0.75	0.75	0.75	0.80	0.80	0.80
PHF Volume:	212	98	74	242	83	427	464	489	85	88	510	405
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	212	98	74	242	83	427	464	489	85	88	510	405
RTOR Reduct:	0	0	0	0	0	427	0	0	0	0	0	242
RTOR Vol:	212	98	74	242	83	0	464	489	85	88	510	163
PCE 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
MLF 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
FinalVolume:	212	98	74	242	83	0	464	489	85	88	510	163
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.57	0.43	0.74	0.26	1.00	1.00	0.85	0.15	1.00	2.00	1.00
Final Sat.:	1650	943	707	1228	422	1650	1650	1405	245	1650	3300	1650
Capacity Analysis Module:												
Vol/Sat:	0.13	0.10	0.10	0.20	0.20	0.00	0.28	0.35	0.35	0.05	0.15	0.10
Crit Moves:	****				****		****				****	
Green/Cycle:	0.14	0.14	0.14	0.22	0.22	0.00	0.31	0.40	0.40	0.08	0.17	0.39
Volume/Cap:	0.91	0.73	0.73	0.91	0.91	0.00	0.91	0.87	0.87	0.66	0.91	0.25
Delay/Veh:	57.1	44.0	47.3	51.8	74.2	0.0	39.6	31.0	56.5	42.0	44.5	16.1
Delay 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
AdjDel/Veh:	57.1	44.0	47.3	51.8	74.2	0.0	39.6	31.0	56.5	42.0	44.5	16.1
DesignQueue:	10	8	8	15	15	0	19	21	21	5	12	6

Note: Queue reported is the number of cars per lane.

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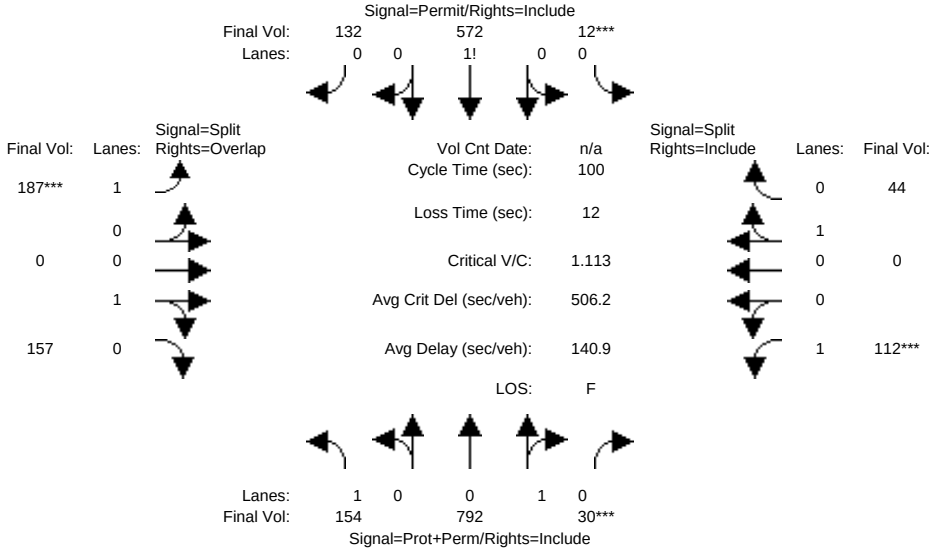
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Ex+Proj AM

Intersection #4: Green Valley Rd and Blemer Rd/Cameo Dr



Street Name:	Green Valley Road						Blemer Road/Cameo Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	117	602	23	9	429	99	86	0	72	95	0	37
Growth 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
Initial Bse:	117	602	23	9	429	99	86	0	72	95	0	37
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	117	602	23	9	429	99	86	0	72	95	0	37
User 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
PHF Adj:	0.76	0.76	0.76	0.75	0.75	0.75	0.46	0.46	0.46	0.85	0.85	0.85
PHF Volume:	154	792	30	12	572	132	187	0	157	112	0	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	154	792	30	12	572	132	187	0	157	112	0	44
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	154	792	30	12	572	132	187	0	157	112	0	44
PCE 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
MLF 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
FinalVolume:	154	792	30	12	572	132	187	0	157	112	0	44
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.96	0.04	0.02	0.80	0.18	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	1650	1589	61	28	1318	304	1650	0	1650	1650	0	1650
Capacity Analysis Module:												
Vol/Sat:	0.09	0.50	0.50	0.43	0.43	0.43	0.11	0.00	0.09	0.07	0.00	0.03
Crit Moves:			****	****			****			****		
Green/Cycle:	0.12	0.36	0.36	0.32	0.56	0.56	0.10	0.00	0.22	0.10	0.00	0.10
Volume/Cap:	0.78	1.37	1.37	1.37	0.78	0.78	1.13	0.00	0.43	0.68	0.00	0.26
Delay/Veh:	44.5	288	498.4	682.3	16.8	26.4	144.2	0.0	26.4	40.6	0.0	32.2
Delay 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
AdjDel/Veh:	44.5	288	498.4	682.3	16.8	26.4	144.2	0.0	26.4	40.6	0.0	32.2
DesignQueue:	8	33	33	30	19	19	10	0	7	6	0	2

Note: Queue reported is the number of cars per lane.

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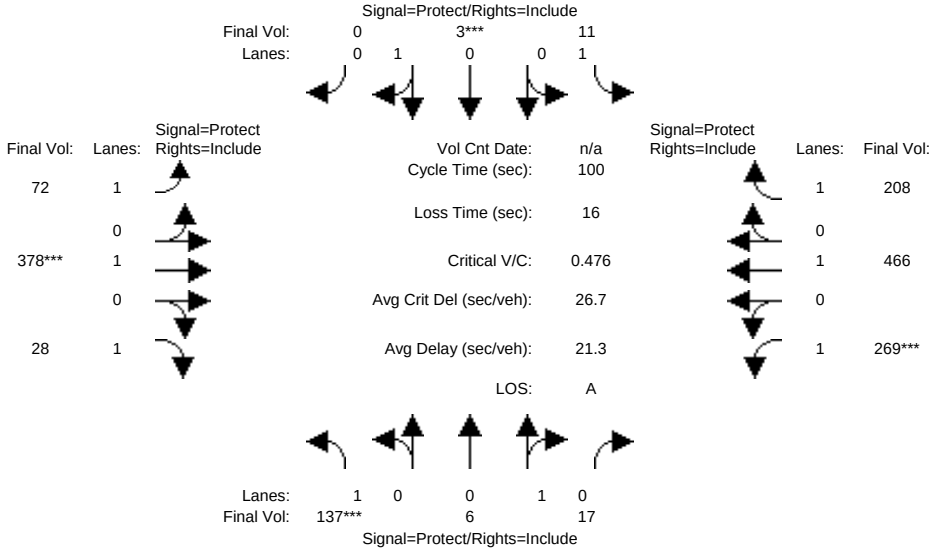
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Ex+Proj AM

Intersection #6: Monte Vista H.S. Main and Stone Valeey Rd



Street Name:	Monte Vista H.S. Main Parking Lot						Stone Valley Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	86	4	11	4	1	0	55	287	125	199	345	162
Growth 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
Initial Bse:	86	4	11	4	1	0	55	287	125	199	345	162
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	86	4	11	4	1	0	55	287	125	199	345	162
User 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
PHF Adj:	0.63	0.63	0.63	0.38	0.38	0.38	0.76	0.76	0.76	0.74	0.74	0.74
PHF Volume:	137	6	17	11	3	0	72	378	164	269	466	219
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	137	6	17	11	3	0	72	378	164	269	466	219
RTOR Reduct:	0	0	0	0	0	0	0	0	137	0	0	11
RTOR Vol:	137	6	17	11	3	0	72	378	28	269	466	208
PCE 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
MLF 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
FinalVolume:	137	6	17	11	3	0	72	378	28	269	466	208
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.27	0.73	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1650	440	1210	1650	1650	0	1650	1650	1650	1650	1650	1650
Capacity Analysis Module:												
Vol/Sat:	0.08	0.01	0.01	0.01	0.00	0.00	0.04	0.23	0.02	0.16	0.28	0.13
Crit Moves:	****				****			****		****		
Green/Cycle:	0.13	0.13	0.13	0.09	0.10	0.00	0.12	0.36	0.36	0.25	0.49	0.49
Volume/Cap:	0.64	0.11	0.11	0.07	0.02	0.00	0.36	0.64	0.05	0.64	0.58	0.26
Delay/Veh:	36.3	29.3	29.3	31.8	31.2	0.0	31.6	22.3	16.2	27.9	14.7	11.5
Delay 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
AdjDel/Veh:	36.3	29.3	29.3	31.8	31.2	0.0	31.6	22.3	16.2	27.9	14.7	11.5
DesignQueue:	7	1	1	1	0	0	4	14	1	12	14	6

Note: Queue reported is the number of cars per lane.

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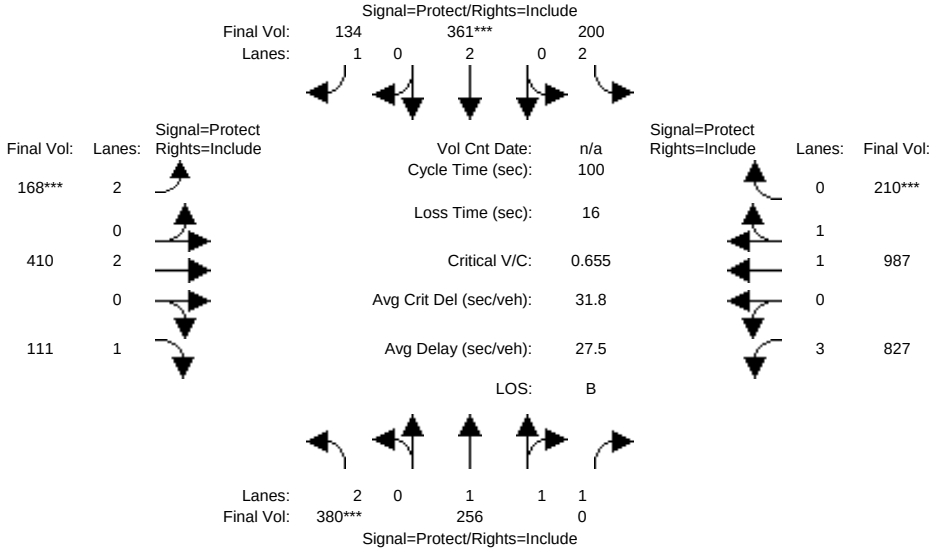
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Ex+Proj AM

Intersection #10: Blackhawak Rd/Crow Canyon Rd and Camino Tassajara



Street Name:	Blackhawk Rd/Crow Canyon Rd						Camino Tassajara					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	357	241	223	176	318	199	141	344	269	645	770	164
Growth 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
Initial Bse:	357	241	223	176	318	199	141	344	269	645	770	164
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	357	241	223	176	318	199	141	344	269	645	770	164
User 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
PHF Adj:	0.94	0.94	0.94	0.88	0.88	0.88	0.84	0.84	0.84	0.78	0.78	0.78
PHF Volume:	380	256	237	200	361	226	168	410	320	827	987	210
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	380	256	237	200	361	226	168	410	320	827	987	210
RTOR Reduct:	0	0	237	0	0	92	0	0	209	0	0	0
RTOR Vol:	380	256	0	200	361	134	168	410	111	827	987	210
PCE 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
MLF 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
FinalVolume:	380	256	0	200	361	134	168	410	111	827	987	210
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	0.91	1.00	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.87	1.00	1.00
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	3.00	1.65	0.35
Final Sat.:	3000	3300	1500	3000	3300	1650	3000	3300	1650	4307	2721	579
Capacity Analysis Module:												
Vol/Sat:	0.13	0.08	0.00	0.07	0.11	0.08	0.06	0.12	0.07	0.19	0.36	0.36
Crit Moves:	****				****		****					****
Green/Cycle:	0.16	0.18	0.00	0.12	0.14	0.14	0.07	0.21	0.21	0.33	0.47	0.47
Volume/Cap:	0.78	0.44	0.00	0.53	0.78	0.58	0.78	0.59	0.32	0.59	0.78	0.78
Delay/Veh:	36.4	28.5	0.0	32.8	37.7	33.5	46.3	28.3	25.9	22.1	19.5	26.5
Delay 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
AdjDel/Veh:	36.4	28.5	0.0	32.8	37.7	33.5	46.3	28.3	25.9	22.1	19.5	26.5
DesignQueue:	9	6	0	5	9	7	4	9	5	11	19	19

Note: Queue reported is the number of cars per lane.

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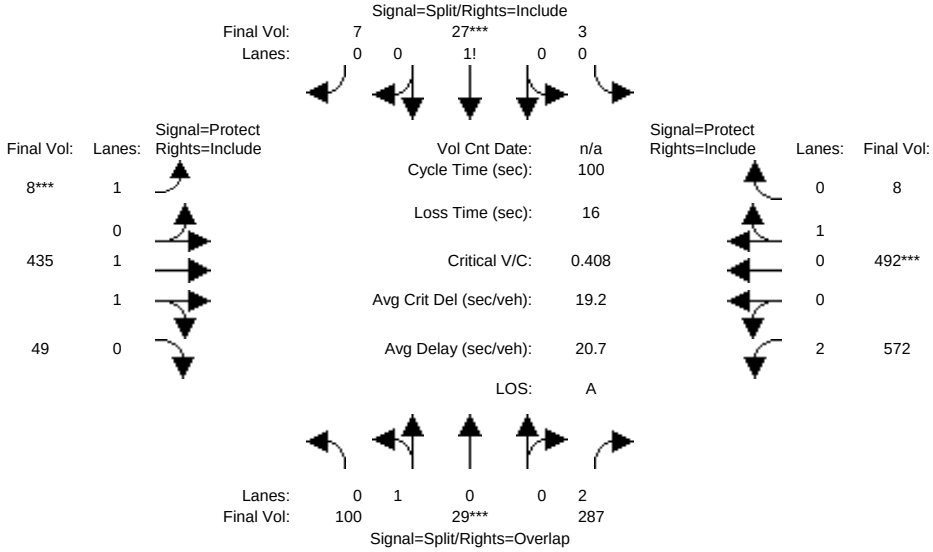
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Ex+Proj Sch

Intersection #1: Daiblo Rd and El Cerro Blvd



Street Name:	Diablo Road						El Cerro Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	92	27	553	2	20	5	7	400	45	526	453	7
Growth 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
Initial Bse:	92	27	553	2	20	5	7	400	45	526	453	7
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	92	27	553	2	20	5	7	400	45	526	453	7
User 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
PHF Adj:	0.92	0.92	0.92	0.75	0.75	0.75	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	100	29	601	3	27	7	8	435	49	572	492	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	100	29	601	3	27	7	8	435	49	572	492	8
RTOR Reduct:	0	0	314	0	0	0	0	0	0	0	0	0
RTOR Vol:	100	29	287	3	27	7	8	435	49	572	492	8
PCE 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
MLF 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
FinalVolume:	100	29	287	3	27	7	8	435	49	572	492	8
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	0.77	0.23	2.00	0.07	0.74	0.19	1.00	1.80	0.20	2.00	0.98	0.02
Final Sat.:	1276	374	3000	122	1222	306	1650	2966	334	3000	1625	25
Capacity Analysis Module:												
Vol/Sat:	0.08	0.08	0.10	0.02	0.02	0.02	0.00	0.15	0.15	0.19	0.30	0.30
Crit Moves:		****			****		****				****	
Green/Cycle:	0.16	0.16	0.49	0.10	0.10	0.10	0.07	0.25	0.25	0.33	0.51	0.51
Volume/Cap:	0.49	0.49	0.20	0.22	0.22	0.22	0.07	0.58	0.58	0.58	0.59	0.59
Delay/Veh:	30.9	34.1	11.2	33.2	32.0	32.5	33.5	26.1	32.1	22.2	14.2	46.9
Delay 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
AdjDel/Veh:	30.9	34.1	11.2	33.2	32.0	32.5	33.5	26.1	32.1	22.2	14.2	46.9
DesignQueue:	6	6	4	2	2	2	0	10	10	11	15	15

Note: Queue reported is the number of cars per lane.

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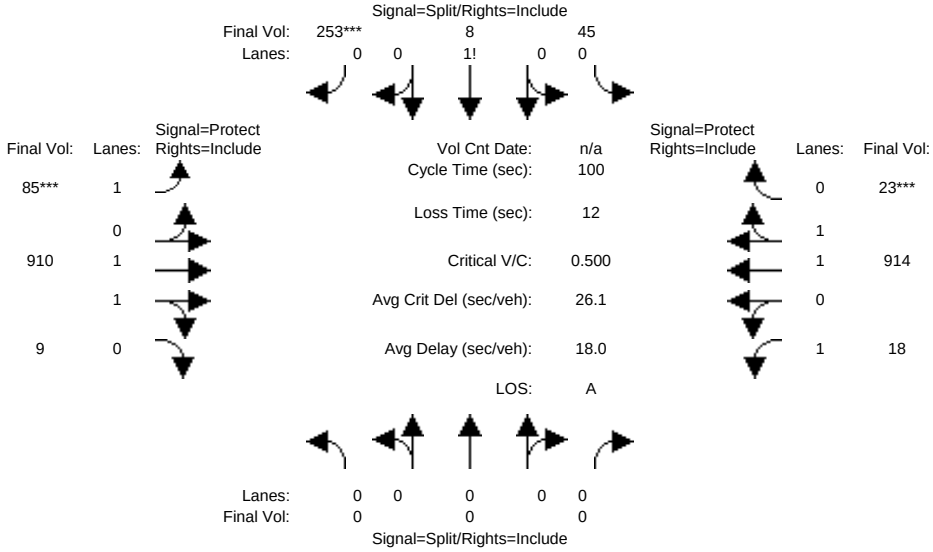
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Ex+Proj Sch

Intersection #2: Matadera Wy and Diablo Rd



Street Name:	Metadera Way						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	23	4	129	82	874	9	16	832	21
Growth 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
Initial Bse:	0	0	0	23	4	129	82	874	9	16	832	21
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	23	4	129	82	874	9	16	832	21
User 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
PHF Adj:	1.00	1.00	1.00	0.51	0.51	0.51	0.96	0.96	0.96	0.91	0.91	0.91
PHF Volume:	0	0	0	45	8	253	85	910	9	18	914	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	45	8	253	85	910	9	18	914	23
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	45	8	253	85	910	9	18	914	23
PCE 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
MLF 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
FinalVolume:	0	0	0	45	8	253	85	910	9	18	914	23
Saturation Flow Module:												
Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.15	0.02	0.83	1.00	1.98	0.02	1.00	1.95	0.05
Final Sat.:	0	0	0	254	44	1422	1720	3405	35	1720	3355	85
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.18	0.18	0.18	0.05	0.27	0.27	0.01	0.27	0.27
Crit Moves:						****	****					****
Green/Cycle:	0.00	0.00	0.00	0.31	0.31	0.31	0.09	0.45	0.45	0.12	0.48	0.48
Volume/Cap:	0.00	0.00	0.00	0.57	0.57	0.57	0.57	0.60	0.60	0.09	0.57	0.57
Delay/Veh:	0.0	0.0	0.0	28.6	49.4	23.4	37.4	16.4	44.9	30.3	14.7	26.0
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	28.6	49.4	23.4	37.4	16.4	44.9	30.3	14.7	26.0
DesignQueue:	0	0	0	12	12	12	4	15	15	1	14	14

Note: Queue reported is the number of cars per lane.

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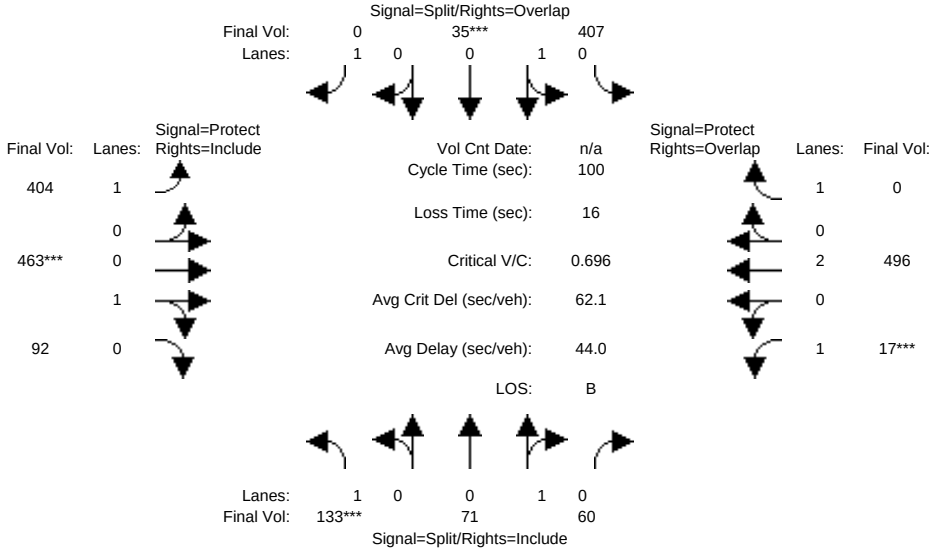
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Ex+Proj Sch

Intersection #3: Green Valley Rd and Diablo Rd



Street Name:	Green Valeey Road						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	69	37	31	334	29	288	396	454	90	16	461	280
Growth 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
Initial Bse:	69	37	31	334	29	288	396	454	90	16	461	280
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	69	37	31	334	29	288	396	454	90	16	461	280
User 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
PHF Adj:	0.52	0.52	0.52	0.82	0.82	0.82	0.98	0.98	0.98	0.93	0.93	0.93
PHF Volume:	133	71	60	407	35	351	404	463	92	17	496	301
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	71	60	407	35	351	404	463	92	17	496	301
RTOR Reduct:	0	0	0	0	0	351	0	0	0	0	0	301
RTOR Vol:	133	71	60	407	35	0	404	463	92	17	496	0
PCE 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
MLF 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
FinalVolume:	133	71	60	407	35	0	404	463	92	17	496	0
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.54	0.46	0.92	0.08	1.00	1.00	0.83	0.17	1.00	2.00	1.00
Final Sat.:	1650	898	752	1518	132	1650	1650	1377	273	1650	3300	1650
Capacity Analysis Module:												
Vol/Sat:	0.08	0.08	0.08	0.27	0.27	0.00	0.24	0.34	0.34	0.01	0.15	0.00
Crit Moves:	****				****			****		****		
Green/Cycle:	0.10	0.10	0.10	0.30	0.30	0.00	0.27	0.37	0.37	0.07	0.17	0.00
Volume/Cap:	0.80	0.79	0.79	0.90	0.90	0.00	0.89	0.90	0.90	0.15	0.89	0.00
Delay/Veh:	50.2	58.0	61.4	41.0	99.0	0.0	40.6	36.5	64.0	33.7	43.1	0.0
Delay 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
AdjDel/Veh:	50.2	58.0	61.4	41.0	99.0	0.0	40.6	36.5	64.0	33.7	43.1	0.0
DesignQueue:	7	7	7	18	18	0	17	21	21	1	12	0

Note: Queue reported is the number of cars per lane.

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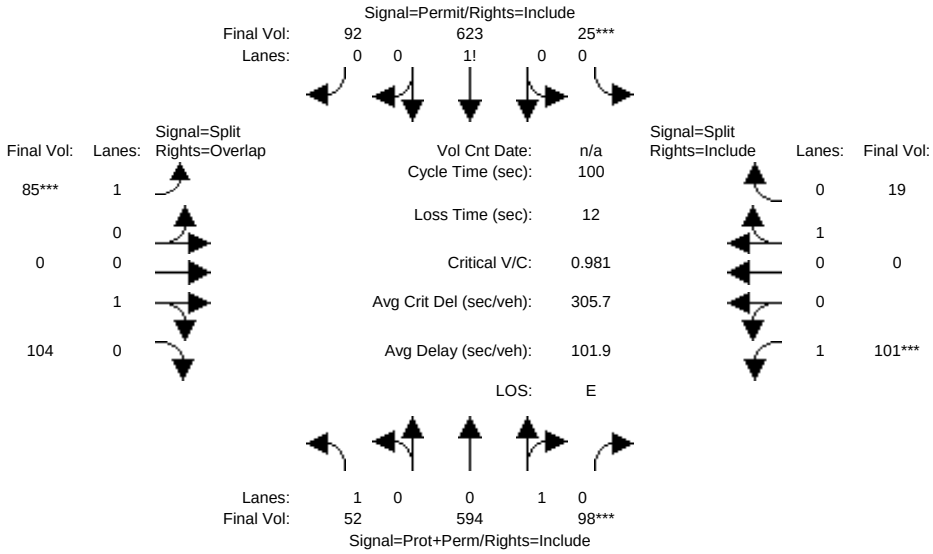
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Ex+Proj Sch

Intersection #4: Green Valley Rd and Blemer Rd/Cameo Dr



Street Name:	Green Valley Road						Blemer Road/Cameo Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	48	552	91	20	492	73	47	0	57	89	0	17
Growth 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
Initial Bse:	48	552	91	20	492	73	47	0	57	89	0	17
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	552	91	20	492	73	47	0	57	89	0	17
User 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
PHF Adj:	0.93	0.93	0.93	0.79	0.79	0.79	0.55	0.55	0.55	0.88	0.88	0.88
PHF Volume:	52	594	98	25	623	92	85	0	104	101	0	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	52	594	98	25	623	92	85	0	104	101	0	19
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	52	594	98	25	623	92	85	0	104	101	0	19
PCE 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
MLF 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
FinalVolume:	52	594	98	25	623	92	85	0	104	101	0	19
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.86	0.14	0.03	0.85	0.12	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	1650	1416	234	56	1388	206	1650	0	1650	1650	0	1650
Capacity Analysis Module:												
Vol/Sat:	0.03	0.42	0.42	0.45	0.45	0.45	0.05	0.00	0.06	0.06	0.00	0.01
Crit Moves:			****	****			****			****		
Green/Cycle:	0.09	0.33	0.33	0.35	0.59	0.59	0.10	0.00	0.19	0.10	0.00	0.10
Volume/Cap:	0.34	1.28	1.28	1.28	0.76	0.76	0.52	0.00	0.33	0.61	0.00	0.12
Delay/Veh:	33.3	206	273.0	404.0	14.8	27.9	35.2	0.0	27.1	37.8	0.0	31.6
Delay 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
AdjDel/Veh:	33.3	206	273.0	404.0	14.8	27.9	35.2	0.0	27.1	37.8	0.0	31.6
DesignQueue:	3	29	29	30	19	19	4	0	5	5	0	1

Note: Queue reported is the number of cars per lane.

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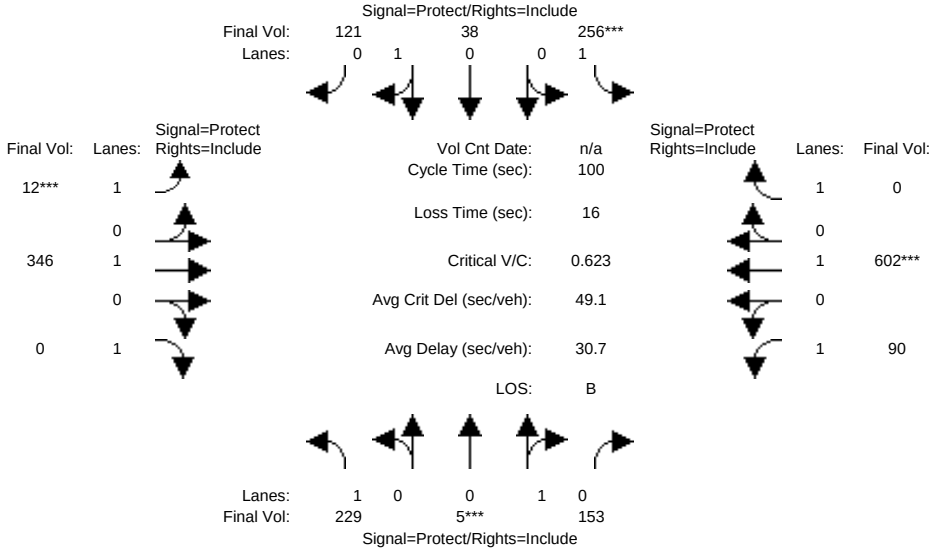
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Ex+Proj Sch

Intersection #6: Monte Vista H.S. Main and Stone Valeey Rd



Street Name:	Monte Vista H.S. Main Parking Lot						Stone Valley Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	135	3	90	100	15	47	10	287	43	76	506	9
Growth 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
Initial Bse:	135	3	90	100	15	47	10	287	43	76	506	9
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	135	3	90	100	15	47	10	287	43	76	506	9
User 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
PHF Adj:	0.59	0.59	0.59	0.39	0.39	0.39	0.83	0.83	0.83	0.84	0.84	0.84
PHF Volume:	229	5	153	256	38	121	12	346	52	90	602	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	229	5	153	256	38	121	12	346	52	90	602	11
RTOR Reduct:	0	0	0	0	0	0	0	0	52	0	0	11
RTOR Vol:	229	5	153	256	38	121	12	346	0	90	602	0
PCE 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
MLF 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
FinalVolume:	229	5	153	256	38	121	12	346	0	90	602	0
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.03	0.97	1.00	0.24	0.76	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1650	53	1597	1650	399	1251	1650	1650	1650	1650	1650	1650
Capacity Analysis Module:												
Vol/Sat:	0.14	0.10	0.10	0.16	0.10	0.10	0.01	0.21	0.00	0.05	0.37	0.00
Crit Moves:		****		****			****				****	
Green/Cycle:	0.18	0.12	0.12	0.19	0.13	0.13	0.07	0.39	0.00	0.13	0.46	0.00
Volume/Cap:	0.76	0.80	0.80	0.80	0.73	0.73	0.10	0.53	0.00	0.42	0.80	0.00
Delay/Veh:	37.3	170	47.1	38.8	57.9	42.5	33.6	18.5	0.0	31.5	22.2	0.0
Delay 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
AdjDel/Veh:	37.3	170	47.1	38.8	57.9	42.5	33.6	18.5	0.0	31.5	22.2	0.0
DesignQueue:	11	8	8	12	8	8	1	12	0	4	20	0

Note: Queue reported is the number of cars per lane.

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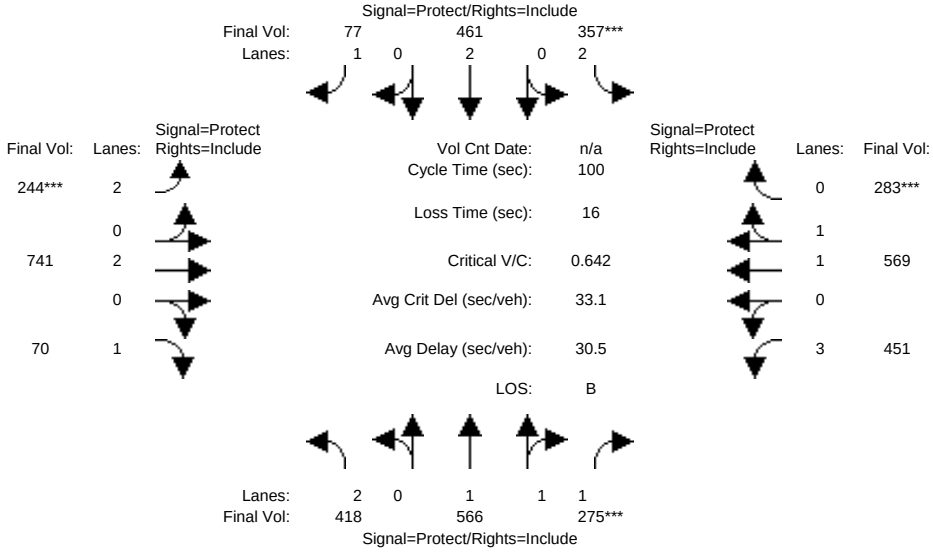
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Ex+Proj Sch

Intersection #10: Blackhawak Rd/Crow Canyon Rd and Camino Tassajara



Street Name:	Blackhawk Rd/Crow Canyon Rd						Camino Tassajara					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	385	521	412	311	401	184	215	652	264	392	495	246
Growth 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
Initial Bse:	385	521	412	311	401	184	215	652	264	392	495	246
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	385	521	412	311	401	184	215	652	264	392	495	246
User 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
PHF Adj:	0.92	0.92	0.92	0.87	0.87	0.87	0.88	0.88	0.88	0.87	0.87	0.87
PHF Volume:	418	566	448	357	461	211	244	741	300	451	569	283
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	418	566	448	357	461	211	244	741	300	451	569	283
RTOR Reduct:	0	0	173	0	0	134	0	0	230	0	0	0
RTOR Vol:	418	566	275	357	461	77	244	741	70	451	569	283
PCE 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
MLF 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
FinalVolume:	418	566	275	357	461	77	244	741	70	451	569	283
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	0.91	1.00	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.87	1.00	1.00
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	3.00	1.34	0.66
Final Sat.:	3000	3300	1500	3000	3300	1650	3000	3300	1650	4307	2204	1096
Capacity Analysis Module:												
Vol/Sat:	0.14	0.17	0.18	0.12	0.14	0.05	0.08	0.22	0.04	0.10	0.26	0.26
Crit Moves:			****	****			****					****
Green/Cycle:	0.20	0.24	0.24	0.16	0.20	0.20	0.11	0.30	0.30	0.14	0.34	0.34
Volume/Cap:	0.71	0.72	0.76	0.76	0.71	0.24	0.76	0.74	0.14	0.74	0.76	0.76
Delay/Veh:	31.4	29.0	33.7	36.2	31.2	26.0	40.6	26.2	19.5	35.1	26.1	29.0
Delay 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
AdjDel/Veh:	31.4	29.0	33.7	36.2	31.2	26.0	40.6	26.2	19.5	35.1	26.1	29.0
DesignQueue:	10	12	12	9	11	3	6	15	3	7	17	17

Note: Queue reported is the number of cars per lane.

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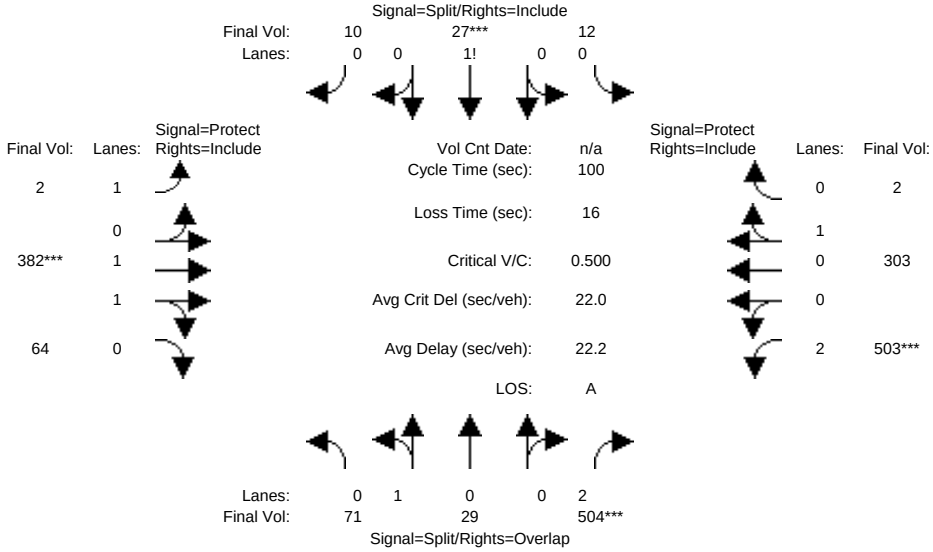
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Ex+Proj PM

Intersection #1: Daiblo Rd and El Cerro Blvd



Street Name:	Diablo Road						El Cerro Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	63	26	695	7	16	6	2	344	58	443	267	2
Growth 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
Initial Bse:	63	26	695	7	16	6	2	344	58	443	267	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	63	26	695	7	16	6	2	344	58	443	267	2
User 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
PHF Adj:	0.89	0.89	0.89	0.60	0.60	0.60	0.90	0.90	0.90	0.88	0.88	0.88
PHF Volume:	71	29	781	12	27	10	2	382	64	503	303	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	71	29	781	12	27	10	2	382	64	503	303	2
RTOR Reduct:	0	0	277	0	0	0	0	0	0	0	0	0
RTOR Vol:	71	29	504	12	27	10	2	382	64	503	303	2
PCE 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
MLF 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
FinalVolume:	71	29	504	12	27	10	2	382	64	503	303	2
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	0.71	0.29	2.00	0.24	0.55	0.21	1.00	1.71	0.29	2.00	0.99	0.01
Final Sat.:	1168	482	3000	398	910	341	1650	2824	476	3000	1638	12
Capacity Analysis Module:												
Vol/Sat:	0.06	0.06	0.17	0.03	0.03	0.03	0.00	0.14	0.14	0.17	0.19	0.19
Crit Moves:			****		****			****		****		
Green/Cycle:	0.26	0.26	0.53	0.10	0.10	0.10	0.13	0.21	0.21	0.26	0.35	0.35
Volume/Cap:	0.23	0.23	0.32	0.29	0.29	0.29	0.01	0.64	0.64	0.64	0.54	0.54
Delay/Veh:	22.3	22.4	10.4	33.3	32.7	33.5	29.1	29.2	36.0	26.3	21.0	71.6
Delay 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
AdjDel/Veh:	22.3	22.4	10.4	33.3	32.7	33.5	29.1	29.2	36.0	26.3	21.0	71.6
DesignQueue:	4	4	7	2	2	2	0	10	10	11	12	12

Note: Queue reported is the number of cars per lane.

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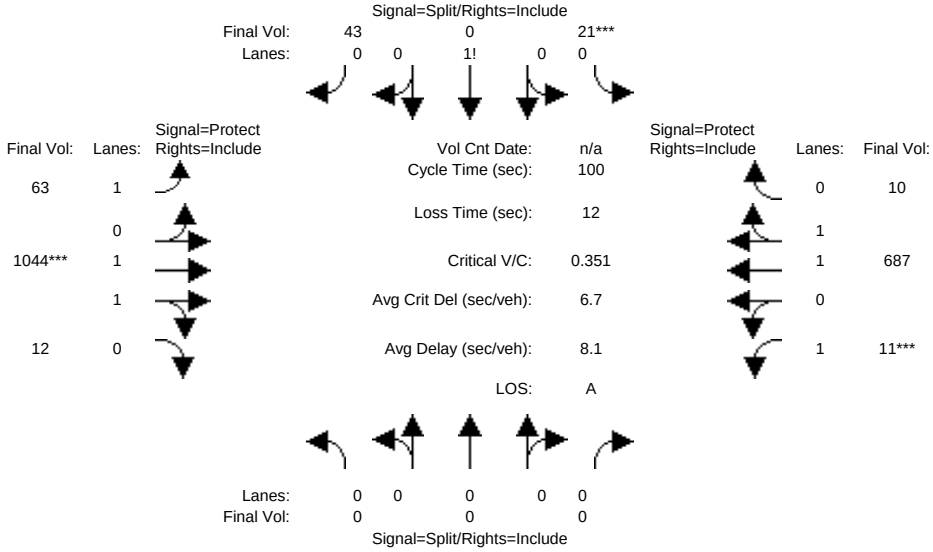
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Ex+Proj PM

Intersection #2: Matadera Wy and Diablo Rd



Street Name:	Metadera Way						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	17	0	35	57	940	11	10	625	9
Growth 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
Initial Bse:	0	0	0	17	0	35	57	940	11	10	625	9
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	17	0	35	57	940	11	10	625	9
User 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
PHF Adj:	1.00	1.00	1.00	0.81	0.81	0.81	0.90	0.90	0.90	0.91	0.91	0.91
PHF Volume:	0	0	0	21	0	43	63	1044	12	11	687	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	21	0	43	63	1044	12	11	687	10
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	21	0	43	63	1044	12	11	687	10
PCE 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
MLF 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
FinalVolume:	0	0	0	21	0	43	63	1044	12	11	687	10
Saturation Flow Module:												
Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.33	0.00	0.67	1.00	1.98	0.02	1.00	1.97	0.03
Final Sat.:	0	0	0	562	0	1158	1720	3400	40	1720	3391	49
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.04	0.04	0.31	0.31	0.01	0.20	0.20
Crit Moves:				****				****		****		
Green/Cycle:	0.00	0.00	0.00	0.10	0.00	0.10	0.20	0.71	0.71	0.07	0.58	0.58
Volume/Cap:	0.00	0.00	0.00	0.37	0.00	0.37	0.18	0.43	0.43	0.09	0.35	0.35
Delay/Veh:	0.0	0.0	0.0	34.3	0.0	33.4	25.6	4.8	10.7	33.5	8.6	11.4
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	34.3	0.0	33.4	25.6	4.8	10.7	33.5	8.6	11.4
DesignQueue:	0	0	0	3	0	3	3	9	9	1	9	9

Note: Queue reported is the number of cars per lane.

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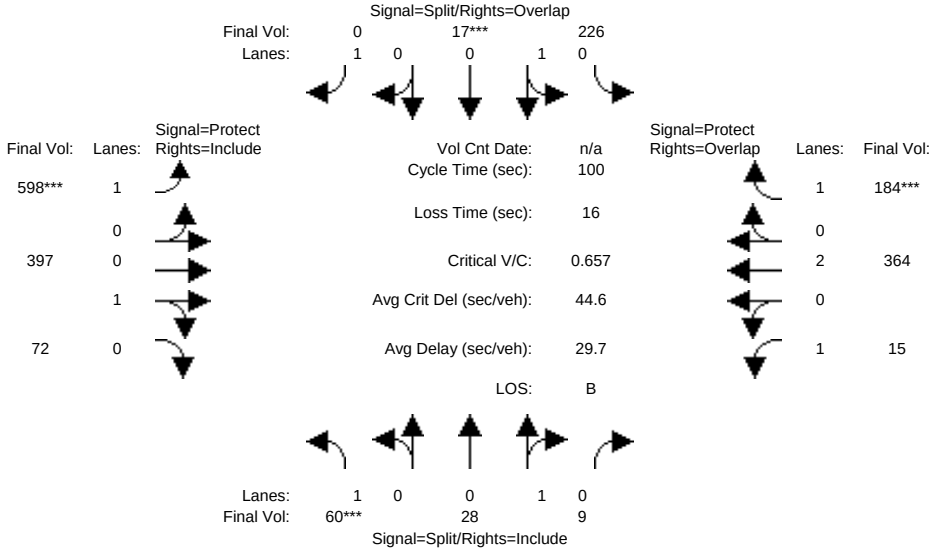
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Ex+Proj PM

Intersection #3: Green Valley Rd and Diablo Rd



Street Name:	Green Valeey Road						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	51	24	8	185	14	231	538	357	65	14	335	377
Growth 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
Initial Bse:	51	24	8	185	14	231	538	357	65	14	335	377
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	51	24	8	185	14	231	538	357	65	14	335	377
User 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
PHF Adj:	0.85	0.85	0.85	0.82	0.82	0.82	0.90	0.90	0.90	0.92	0.92	0.92
PHF Volume:	60	28	9	226	17	282	598	397	72	15	364	410
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	60	28	9	226	17	282	598	397	72	15	364	410
RTOR Reduct:	0	0	0	0	0	282	0	0	0	0	0	226
RTOR Vol:	60	28	9	226	17	0	598	397	72	15	364	184
PCE 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
MLF 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
FinalVolume:	60	28	9	226	17	0	598	397	72	15	364	184
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.75	0.25	0.93	0.07	1.00	1.00	0.85	0.15	1.00	2.00	1.00
Final Sat.:	1650	1238	412	1534	116	1650	1650	1396	254	1650	3300	1650
Capacity Analysis Module:												
Vol/Sat:	0.04	0.02	0.02	0.15	0.15	0.00	0.36	0.28	0.28	0.01	0.11	0.11
Crit Moves:	****				****		****					****
Green/Cycle:	0.10	0.10	0.10	0.18	0.18	0.00	0.43	0.45	0.45	0.11	0.13	0.31
Volume/Cap:	0.36	0.23	0.23	0.84	0.84	0.00	0.84	0.63	0.63	0.08	0.83	0.36
Delay/Veh:	33.0	32.1	32.4	44.7	112	0.0	25.7	17.5	23.1	30.7	41.2	20.9
Delay 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
AdjDel/Veh:	33.0	32.1	32.4	44.7	112	0.0	25.7	17.5	23.1	30.7	41.2	20.9
DesignQueue:	3	2	2	12	12	0	21	15	15	1	9	7

Note: Queue reported is the number of cars per lane.

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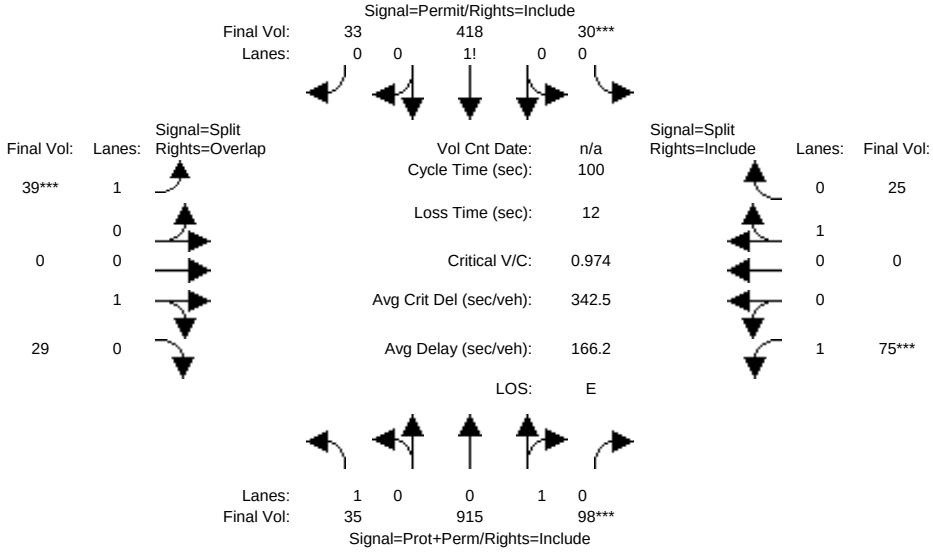
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Ex+Proj PM

Intersection #4: Green Valley Rd and Blemer Rd/Cameo Dr



Street Name:	Green Valley Road						Blemer Road/Cameo Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	32	833	89	26	368	29	28	0	21	57	0	19
Growth 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
Initial Bse:	32	833	89	26	368	29	28	0	21	57	0	19
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	32	833	89	26	368	29	28	0	21	57	0	19
User 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
PHF Adj:	0.91	0.91	0.91	0.88	0.88	0.88	0.72	0.72	0.72	0.76	0.76	0.76
PHF Volume:	35	915	98	30	418	33	39	0	29	75	0	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	35	915	98	30	418	33	39	0	29	75	0	25
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	35	915	98	30	418	33	39	0	29	75	0	25
PCE 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
MLF 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
FinalVolume:	35	915	98	30	418	33	39	0	29	75	0	25
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.90	0.10	0.06	0.87	0.07	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	1650	1491	159	101	1435	113	1650	0	1650	1650	0	1650
Capacity Analysis Module:												
Vol/Sat:	0.02	0.61	0.61	0.29	0.29	0.29	0.02	0.00	0.02	0.05	0.00	0.02
Crit Moves:			****	****			****			****		
Green/Cycle:	0.13	0.46	0.46	0.22	0.55	0.55	0.10	0.00	0.23	0.10	0.00	0.10
Volume/Cap:	0.16	1.33	1.33	1.33	0.53	0.53	0.24	0.00	0.08	0.45	0.00	0.15
Delay/Veh:	29.7	246	325.0	452.6	11.6	17.4	32.1	0.0	23.1	34.1	0.0	31.7
Delay 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
AdjDel/Veh:	29.7	246	325.0	452.6	11.6	17.4	32.1	0.0	23.1	34.1	0.0	31.7
DesignQueue:	2	35	35	22	13	13	2	0	1	4	0	1

Note: Queue reported is the number of cars per lane.

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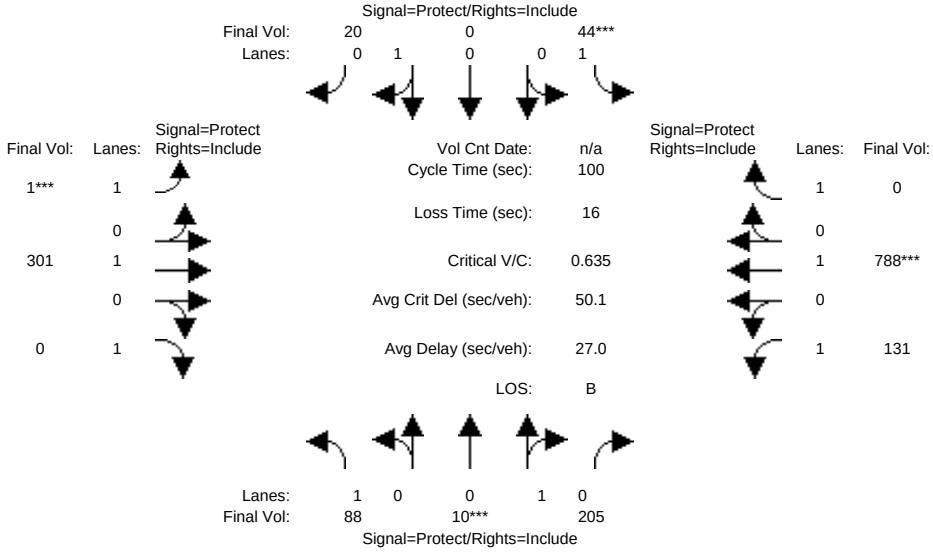
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Ex+Proj PM

Intersection #6: Monte Vista H.S. Main and Stone Valeey Rd



Street Name:	Monte Vista H.S. Main Parking Lot						Stone Valley Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	52	6	121	18	0	8	1	286	45	123	741	1
Growth 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
Initial Bse:	52	6	121	18	0	8	1	286	45	123	741	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	52	6	121	18	0	8	1	286	45	123	741	1
User 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
PHF Adj:	0.59	0.59	0.59	0.41	0.41	0.41	0.95	0.95	0.95	0.94	0.94	0.94
PHF Volume:	88	10	205	44	0	20	1	301	47	131	788	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	88	10	205	44	0	20	1	301	47	131	788	1
RTOR Reduct:	0	0	0	0	0	0	0	0	47	0	0	1
RTOR Vol:	88	10	205	44	0	20	1	301	0	131	788	0
PCE 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
MLF 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
FinalVolume:	88	10	205	44	0	20	1	301	0	131	788	0
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.05	0.95	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1650	78	1572	1650	0	1650	1650	1650	1650	1650	1650	1650
Capacity Analysis Module:												
Vol/Sat:	0.05	0.13	0.13	0.03	0.00	0.01	0.00	0.18	0.00	0.08	0.48	0.00
Crit Moves:		****		****			****				****	
Green/Cycle:	0.09	0.15	0.15	0.07	0.00	0.07	0.07	0.43	0.00	0.19	0.55	0.00
Volume/Cap:	0.59	0.87	0.87	0.38	0.00	0.17	0.01	0.42	0.00	0.42	0.87	0.00
Delay/Veh:	37.9	158	50.9	35.2	0.0	33.8	33.3	15.4	0.0	28.2	21.4	0.0
Delay 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
AdjDel/Veh:	37.9	158	50.9	35.2	0.0	33.8	33.3	15.4	0.0	28.2	21.4	0.0
DesignQueue:	5	10	10	2	0	1	0	10	0	6	22	0

Note: Queue reported is the number of cars per lane.

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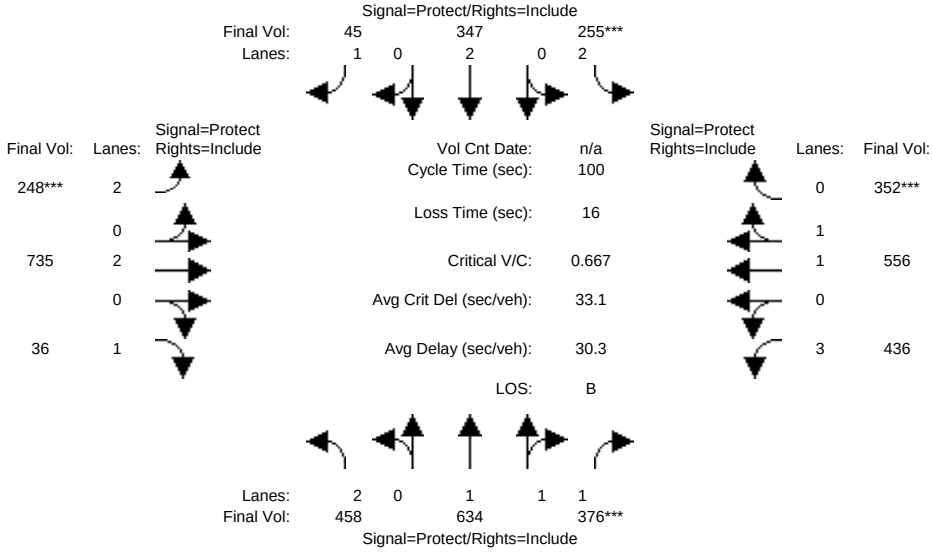
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
Ex+Proj PM

Intersection #10: Blackhawak Rd/Crow Canyon Rd and Camino Tassajara



Street Name:	Blackhawk Rd/Crow Canyon Rd						Camino Tassajara					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	417	577	494	250	340	178	221	654	256	384	489	310
Growth 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
Initial Bse:	417	577	494	250	340	178	221	654	256	384	489	310
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	417	577	494	250	340	178	221	654	256	384	489	310
User 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
PHF Adj:	0.91	0.91	0.91	0.98	0.98	0.98	0.89	0.89	0.89	0.88	0.88	0.88
PHF Volume:	458	634	543	255	347	182	248	735	288	436	556	352
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	458	634	543	255	347	182	248	735	288	436	556	352
RTOR Reduct:	0	0	167	0	0	137	0	0	252	0	0	0
RTOR Vol:	458	634	376	255	347	45	248	735	36	436	556	352
PCE 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
MLF 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
FinalVolume:	458	634	376	255	347	45	248	735	36	436	556	352
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	0.91	1.00	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.87	1.00	1.00
Lanes:	2.00	1.88	1.12	2.00	2.00	1.00	2.00	2.00	1.00	3.00	1.22	0.78
Final Sat.:	3000	3109	1674	3000	3300	1650	3000	3300	1650	4307	2020	1280
Capacity Analysis Module:												
Vol/Sat:	0.15	0.20	0.22	0.09	0.11	0.03	0.08	0.22	0.02	0.10	0.28	0.28
Crit Moves:			****	****			****					****
Green/Cycle:	0.23	0.28	0.28	0.11	0.16	0.16	0.10	0.31	0.31	0.14	0.35	0.35
Volume/Cap:	0.66	0.72	0.79	0.79	0.66	0.17	0.79	0.72	0.07	0.72	0.79	0.79
Delay/Veh:	28.6	27.0	31.8	42.4	32.6	28.0	42.7	25.3	18.8	34.5	27.1	29.3
Delay 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
AdjDel/Veh:	28.6	27.0	31.8	42.4	32.6	28.0	42.7	25.3	18.8	34.5	27.1	29.3
DesignQueue:	10	14	14	6	8	2	6	15	1	7	18	18

Note: Queue reported is the number of cars per lane.

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	360	53	563	480	3	100	16	557	4	35	3
Future Volume (veh/h)	9	360	53	563	480	3	100	16	557	4	35	3
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.98	1.00		0.97	1.00		0.95
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	11	439	65	633	539	3	128	21	714	6	50	4
Adj No. of Lanes	1	2	0	2	1	0	0	1	2	0	1	0
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.78	0.78	0.78	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	15	833	123	753	888	5	376	62	1274	10	80	6
Arrive On Green	0.01	0.27	0.27	0.22	0.48	0.48	0.24	0.24	0.24	0.05	0.05	0.05
Sat Flow, veh/h	1774	3096	456	3442	1850	10	1534	252	2710	182	1520	122
Grp Volume(v), veh/h	11	250	254	633	0	542	149	0	714	60	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1782	1721	0	1861	1786	0	1355	1824	0	0
Q Serve(g_s), s	0.5	9.0	9.1	13.1	0.0	16.0	5.1	0.0	14.3	2.4	0.0	0.0
Cycle Q Clear(g_c), s	0.5	9.0	9.1	13.1	0.0	16.0	5.1	0.0	14.3	2.4	0.0	0.0
Prop In Lane	1.00		0.26	1.00		0.01	0.86		1.00	0.10		0.07
Lane Grp Cap(c), veh/h	15	476	479	753	0	893	437	0	1274	96	0	0
V/C Ratio(X)	0.76	0.52	0.53	0.84	0.00	0.61	0.34	0.00	0.56	0.62	0.00	0.00
Avail Cap(c_a), veh/h	475	830	836	1614	0	893	598	0	1518	611	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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.9	23.2	23.3	27.9	0.0	14.3	23.2	0.0	14.6	34.6	0.0	0.0
Incr Delay (d2), s/veh	25.0	1.3	1.3	1.0	0.0	1.4	0.2	0.0	0.1	6.4	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	0.3	4.5	4.6	6.3	0.0	8.5	2.5	0.0	5.3	1.4	0.0	0.0
LnGrp Delay(d),s/veh	62.0	24.5	24.6	28.9	0.0	15.7	23.4	0.0	14.7	41.0	0.0	0.0
LnGrp LOS	E	C	C	C		B	C		B	D		
Approach Vol, veh/h		515			1175			863			60	
Approach Delay, s/veh		25.3			22.8			16.2			41.0	
Approach LOS		C			C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.3	24.1		7.9	4.6	39.8		22.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	35.0	35.0		25.0	20.0	35.0		25.0
Max Q Clear Time (g_c+I1), s	15.1	11.1		4.4	2.5	18.0		16.3
Green Ext Time (p_c), s	1.2	9.0		0.2	0.0	8.3		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	763	42	32	866	19	0	0	0	10	15	139
Future Volume (veh/h)	118	763	42	32	866	19	0	0	0	10	15	139
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98				1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	142	919	51	37	1007	22				22	33	302
Adj No. of Lanes	1	2	0	1	2	0				0	1	0
Peak Hour Factor	0.83	0.83	0.83	0.86	0.86	0.86				0.46	0.46	0.46
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	180	1863	103	45	1668	36				25	38	349
Arrive On Green	0.10	0.55	0.55	0.03	0.47	0.47				0.26	0.26	0.26
Sat Flow, veh/h	1774	3405	189	1774	3539	77				96	144	1322
Grp Volume(v), veh/h	142	478	492	37	503	526				357	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1824	1774	1770	1847				1563	0	0
Q Serve(g_s), s	5.7	12.3	12.3	1.5	15.4	15.4				16.0	0.0	0.0
Cycle Q Clear(g_c), s	5.7	12.3	12.3	1.5	15.4	15.4				16.0	0.0	0.0
Prop In Lane	1.00		0.10	1.00		0.04				0.06		0.85
Lane Grp Cap(c), veh/h	180	968	998	45	834	871				412	0	0
V/C Ratio(X)	0.79	0.49	0.49	0.81	0.60	0.60				0.87	0.00	0.00
Avail Cap(c_a), veh/h	483	968	998	483	964	1007				468	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	32.2	10.3	10.3	35.6	14.3	14.3				25.8	0.0	0.0
Incr Delay (d2), s/veh	2.9	0.6	0.5	12.2	1.1	1.1				13.1	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
%ile BackOfQ(50%),veh/ln	2.9	6.1	6.3	0.9	7.7	8.0				8.3	0.0	0.0
LnGrp Delay(d),s/veh	35.1	10.9	10.8	47.8	15.4	15.4				38.9	0.0	0.0
LnGrp LOS	D	B	B	D	B	B				D		
Approach Vol, veh/h		1112			1066						357	
Approach Delay, s/veh		14.0			16.5						38.9	
Approach LOS		B			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	5.9	44.2		23.4	11.4	38.6		
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s	20.0	40.0		22.0	20.0	40.0		
Max Q Clear Time (g_c+I1), s	3.5	14.3		18.0	7.7	17.4		
Green Ext Time (p_c), s	0.0	19.2		0.7	0.1	17.2		

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	348	367	64	70	408	324	121	56	42	201	69	354
Future Volume (veh/h)	348	367	64	70	408	324	121	56	42	201	69	354
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.95	1.00		1.00	1.00		0.95
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	464	489	85	88	510	405	212	98	74	242	83	427
Adj No. of Lanes	1	1	0	1	2	1	1	1	0	0	1	1
Peak Hour Factor	0.75	0.75	0.75	0.80	0.80	0.80	0.57	0.57	0.57	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	497	708	123	108	847	740	237	132	99	321	110	804
Arrive On Green	0.28	0.46	0.46	0.06	0.24	0.24	0.13	0.13	0.13	0.24	0.24	0.24
Sat Flow, veh/h	1774	1546	269	1774	3539	1504	1774	985	744	1337	459	1500
Grp Volume(v), veh/h	464	0	574	88	510	405	212	0	172	325	0	427
Grp Sat Flow(s),veh/h/ln	1774	0	1815	1774	1770	1504	1774	0	1728	1796	0	1500
Q Serve(g_s), s	38.2	0.0	37.5	7.3	19.2	28.7	17.6	0.0	14.3	25.1	0.0	28.6
Cycle Q Clear(g_c), s	38.2	0.0	37.5	7.3	19.2	28.7	17.6	0.0	14.3	25.1	0.0	28.6
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.43	0.74		1.00
Lane Grp Cap(c), veh/h	497	0	832	108	847	740	237	0	231	431	0	804
V/C Ratio(X)	0.93	0.00	0.69	0.81	0.60	0.55	0.89	0.00	0.74	0.75	0.00	0.53
Avail Cap(c_a), veh/h	593	0	832	178	1064	832	296	0	289	600	0	945
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.5	0.0	32.1	69.4	50.6	27.8	63.8	0.0	62.4	52.7	0.0	24.1
Incr Delay (d2), s/veh	21.0	0.0	2.6	5.4	0.8	0.8	21.1	0.0	5.5	4.5	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.6	0.0	19.4	3.8	9.4	16.8	10.0	0.0	7.2	13.0	0.0	12.0
LnGrp Delay(d),s/veh	73.6	0.0	34.7	74.9	51.4	28.5	84.9	0.0	67.9	57.2	0.0	24.9
LnGrp LOS	E		C	E	D	C	F		E	E		C
Approach Vol, veh/h		1038			1003			384			752	
Approach Delay, s/veh		52.1			44.2			77.3			38.9	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.1	72.6		39.9	45.9	39.8		24.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	15.0	40.0		50.0	50.0	45.0		25.0
Max Q Clear Time (g_c+I1), s	9.3	39.5		30.6	40.2	30.7		19.6
Green Ext Time (p_c), s	0.0	0.4		5.4	1.7	5.1		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	49.5
HCM 2010 LOS	D

Notes

User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	86	72	117	625	534	99
Future Volume (vph)	86	72	117	625	534	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.92	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1628	1583	1770	1863	1815	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1628	1583	1770	1863	1815	
Peak-hour factor, PHF	0.46	0.46	0.76	0.76	0.75	0.75
Adj. Flow (vph)	187	157	154	822	712	132
RTOR Reduction (vph)	0	109	0	0	4	0
Lane Group Flow (vph)	187	48	154	822	840	0
Confl. Peds. (#/hr)	28					3
Confl. Bikes (#/hr)						3
Turn Type	Perm	pm+ov	Prot	NA	NA	
Protected Phases		5	5	2	6	
Permitted Phases	4	4				
Actuated Green, G (s)	16.5	29.4	12.9	57.5	40.6	
Effective Green, g (s)	16.5	29.4	12.9	57.5	40.6	
Actuated g/C Ratio	0.17	0.30	0.13	0.59	0.42	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	1.8	1.8	1.8	3.0	3.0	
Lane Grp Cap (vph)	276	545	235	1104	759	
v/s Ratio Prot		0.01	0.09	c0.44	c0.46	
v/s Ratio Perm	c0.11	0.02				
v/c Ratio	0.68	0.09	0.66	0.74	1.11	
Uniform Delay, d1	37.8	24.2	39.9	14.4	28.2	
Progression Factor	1.00	1.00	1.00	1.00	0.50	
Incremental Delay, d2	5.1	0.0	4.9	2.8	57.7	
Delay (s)	42.9	24.2	44.9	17.2	71.9	
Level of Service	D	C	D	B	E	
Approach Delay (s)	34.4			21.5	71.9	
Approach LOS	C			C	E	

Intersection Summary			
HCM 2000 Control Delay	43.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	97.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	95	37	688	23	9	538
Future Volume (vph)	95	37	688	23	9	538
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	1.00			1.00
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1765	1583	1853			1861
Flt Permitted	0.95	1.00	1.00			0.98
Satd. Flow (perm)	1765	1583	1853			1830
Peak-hour factor, PHF	0.85	0.85	0.76	0.76	0.75	0.75
Adj. Flow (vph)	112	44	905	30	12	717
RTOR Reduction (vph)	0	33	1	0	0	0
Lane Group Flow (vph)	112	11	934	0	0	729
Confl. Peds. (#/hr)	1			2	2	
Confl. Bikes (#/hr)				1		
Turn Type	Perm	Perm	NA		Perm	NA
Protected Phases			2			6
Permitted Phases	3	3			6	
Actuated Green, G (s)	11.0	11.0	57.5			40.6
Effective Green, g (s)	11.0	11.0	57.5			40.6
Actuated g/C Ratio	0.11	0.11	0.59			0.42
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	2.1	2.1	3.0			3.0
Lane Grp Cap (vph)	200	179	1098			765
v/s Ratio Prot			c0.50			
v/s Ratio Perm	c0.06	0.01				c0.40
v/c Ratio	0.56	0.06	0.85			0.95
Uniform Delay, d1	40.7	38.4	16.2			27.3
Progression Factor	1.00	1.00	0.44			1.00
Incremental Delay, d2	2.3	0.1	5.7			21.7
Delay (s)	43.0	38.5	12.9			48.9
Level of Service	D	D	B			D
Approach Delay (s)	41.7		12.9			48.9
Approach LOS	D		B			D

Intersection Summary			
HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	97.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	155.4
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	22	53	422	0	82	101	1	0	730	10	28
Future Vol, veh/h	0	22	53	422	0	82	101	1	0	730	10	28
Peak Hour Factor	0.92	0.60	0.60	0.60	0.92	0.98	0.98	0.98	0.92	0.69	0.69	0.69
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	37	88	703	0	84	103	1	0	1058	14	41
Number of Lanes	0	1	1	1	0	1	2	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	3
HCM Control Delay	216.1	15.9	142.4
HCM LOS	F	C	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	97%	0%	100%	0%	0%	100%	0%	0%	11%	0%
Vol Thru, %	0%	3%	0%	0%	100%	0%	0%	100%	97%	89%	0%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	3%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	372	368	28	22	53	422	82	67	35	28	28
LT Vol	372	358	0	22	0	0	82	0	0	3	0
Through Vol	0	10	0	0	53	0	0	67	34	25	0
RT Vol	0	0	28	0	0	422	0	0	1	0	28
Lane Flow Rate	540	533	41	37	88	703	84	69	35	34	34
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	1.229	1.212	0.079	0.09	0.204	1.488	0.231	0.181	0.093	0.095	0.088
Departure Headway (Hd)	8.996	8.982	7.787	9.146	8.638	7.927	11.034	10.52	10.499	10.904	10.151
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	410	410	463	394	418	464	327	344	343	331	355
Service Time	6.696	6.682	5.487	6.846	6.338	5.627	8.734	8.22	8.199	8.604	7.851
HCM Lane V/C Ratio	1.317	1.3	0.089	0.094	0.211	1.515	0.257	0.201	0.102	0.103	0.096
HCM Control Delay	150.6	144.1	11.2	12.7	13.5	252.2	17	15.5	14.3	14.7	13.8
HCM Lane LOS	F	F	B	B	B	F	C	C	B	B	B
HCM 95th-tile Q	20.5	19.8	0.3	0.3	0.8	35	0.9	0.7	0.3	0.3	0.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↰	↱
Traffic Vol, veh/h	0	3	25	28
Future Vol, veh/h	0	3	25	28
Peak Hour Factor	0.92	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	4	30	34
Number of Lanes	0	0	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	14.3
HCM LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	287	125	199	345	162	86	4	11	4	1	0
Future Volume (veh/h)	55	287	125	199	345	162	86	4	11	4	1	0
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.67	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	72	378	164	269	466	219	137	6	17	11	3	0
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.76	0.76	0.76	0.74	0.74	0.74	0.63	0.63	0.63	0.38	0.38	0.38
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	94	608	501	311	836	705	175	91	259	14	375	0
Arrive On Green	0.05	0.33	0.33	0.18	0.45	0.45	0.10	0.29	0.29	0.01	0.20	0.00
Sat Flow, veh/h	1774	1863	1536	1774	1863	1571	1774	313	888	1774	1863	0
Grp Volume(v), veh/h	72	378	164	269	466	219	137	0	23	11	3	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1536	1774	1863	1571	1774	0	1202	1774	1863	0
Q Serve(g_s), s	3.3	14.3	6.7	12.3	15.3	7.4	6.3	0.0	1.1	0.5	0.1	0.0
Cycle Q Clear(g_c), s	3.3	14.3	6.7	12.3	15.3	7.4	6.3	0.0	1.1	0.5	0.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.74	1.00		0.00
Lane Grp Cap(c), veh/h	94	608	501	311	836	705	175	0	351	14	375	0
V/C Ratio(X)	0.77	0.62	0.33	0.86	0.56	0.31	0.78	0.00	0.07	0.77	0.01	0.00
Avail Cap(c_a), veh/h	640	896	739	640	896	756	533	0	434	533	672	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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	38.9	23.7	21.1	33.3	16.8	14.7	36.6	0.0	21.3	41.2	26.6	0.0
Incr Delay (d2), s/veh	4.9	1.5	0.5	2.8	0.9	0.4	7.4	0.0	0.1	26.3	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	1.8	7.6	2.9	6.2	8.0	3.3	3.4	0.0	0.4	0.4	0.1	0.0
LnGrp Delay(d),s/veh	43.8	25.2	21.7	36.2	17.7	15.0	44.0	0.0	21.3	67.5	26.6	0.0
LnGrp LOS	D	C	C	D	B	B	D		C	E	C	
Approach Vol, veh/h		614			954			160			14	
Approach Delay, s/veh		26.4			22.3			40.7			58.7	
Approach LOS		C			C			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.6	31.6	4.7	28.3	8.4	41.8	12.2	20.7
Change Period (Y+Rc), s	4.0	4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	30.0	40.0	25.0	30.0	30.0	40.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	14.3	16.3	2.5	3.1	5.3	17.3	8.3	2.1
Green Ext Time (p_c), s	0.4	10.9	0.0	0.1	0.1	10.6	0.3	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.7
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	54.5
Intersection LOS	F

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Lane Configurations									
Traffic Vol, veh/h	0	198	357	0	535	71	0	61	114
Future Vol, veh/h	0	198	357	0	535	71	0	61	114
Peak Hour Factor	0.92	0.86	0.86	0.92	0.93	0.93	0.92	0.52	0.52
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	230	415	0	575	76	0	117	219
Number of Lanes	0	1	1	0	1	0	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	23.1	106.2	14.5
HCM LOS	C	F	B

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	88%	0%	0%
Vol Right, %	0%	0%	12%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	198	357	606	61	114
LT Vol	198	0	0	61	0
Through Vol	0	357	535	0	0
RT Vol	0	0	71	0	114
Lane Flow Rate	230	415	652	117	219
Geometry Grp	7	7	4	7	7
Degree of Util (X)	0.449	0.752	1.141	0.26	0.412
Departure Headway (Hd)	7.268	6.756	6.303	8.352	7.114
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	500	540	580	433	509
Service Time	4.968	4.456	4.313	6.052	4.814
HCM Lane V/C Ratio	0.46	0.769	1.124	0.27	0.43
HCM Control Delay	15.8	27.1	106.2	14	14.7
HCM Lane LOS	C	D	F	B	B
HCM 95th-tile Q	2.3	6.5	21.4	1	2

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	20	425	19	92	40	0	0	29	53
Future Vol, veh/h	0	0	0	20	425	19	92	40	0	0	29	53
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	84	84	84	91	91	91	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	24	506	23	101	44	0	0	37	67

Major/Minor	Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	617	577	-	-	566	518
Stage 1	-	-	-	0	0	-	-	566	-
Stage 2	-	-	-	617	577	-	-	0	-
Critical Hdwy	4.12	-	-	7.12	6.52	-	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-	-	-	-
Follow-up Hdwy	2.218	-	-	3.518	4.018	-	-	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	402	427	0	0	434	558
Stage 1	-	-	-	-	-	0	0	507	-
Stage 2	-	-	-	477	502	0	0	-	-
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	331	427	-	-	434	557
Mov Cap-2 Maneuver	-	-	-	331	427	-	-	434	-
Stage 1	-	-	-	-	-	-	-	507	-
Stage 2	-	-	-	389	502	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		18.7	13.9
HCM LOS		C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	331	427	-	-	-	506
HCM Lane V/C Ratio	0.305	0.103	-	-	-	0.205
HCM Control Delay (s)	20.6	14.4	-	-	-	13.9
HCM Lane LOS	C	B	-	-	-	B
HCM 95th %tile Q(veh)	1.3	0.3	-	-	-	0.8

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	359	31	0	0	0	0	105	41	28	21	0
Future Vol, veh/h	27	359	31	0	0	0	0	105	41	28	21	0
Conflicting Peds, #/hr	1	0	0	0	0	0	0	0	4	4	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	85	-	100	0	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	92	92	92	91	91	91	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	399	34	0	0	0	0	115	45	35	27	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	1	0	0	-	477	420	539	494	-
Stage 1	-	-	-	-	476	-	1	1	-
Stage 2	-	-	-	-	1	-	538	493	-
Critical Hdwy	4.12	-	-	-	6.52	6.22	7.12	6.52	-
Critical Hdwy Stg 1	-	-	-	-	5.52	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	-	4.018	3.318	3.518	4.018	-
Pot Cap-1 Maneuver	1622	-	-	0	487	633	453	476	0
Stage 1	-	-	-	0	557	-	-	-	0
Stage 2	-	-	-	0	-	-	527	547	0
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	1622	-	-	-	475	633	336	464	-
Mov Cap-2 Maneuver	-	-	-	-	475	-	336	464	-
Stage 1	-	-	-	-	544	-	-	-	-
Stage 2	-	-	-	-	-	-	376	534	-

Approach	EB	NB	SB
HCM Control Delay, s	0.5	12.9	15.4
HCM LOS		B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	SBLn1	SBLn2
Capacity (veh/h)	475	475	633	1622	-	-	336	464
HCM Lane V/C Ratio	0.121	0.121	0.071	0.018	-	-	0.105	0.057
HCM Control Delay (s)	13.6	13.6	11.1	7.3	0	-	17	13.2
HCM Lane LOS	B	B	B	A	A	-	C	B
HCM 95th %tile Q(veh)	0.4	0.4	0.2	0.1	-	-	0.4	0.2

Intersection	
Intersection Delay, s/veh	18.8
Intersection LOS	C

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations									
Traffic Vol, veh/h	0	277	147	0	288	110	0	86	0
Future Vol, veh/h	0	277	147	0	288	110	0	86	0
Peak Hour Factor	0.92	0.84	0.84	0.92	0.72	0.72	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	330	175	0	400	153	0	95	0
Number of Lanes	0	1	1	0	1	2	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	18.2	20.3	13
HCM LOS	C	C	B

Lane	NBLn1	NBLn2	NBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	288	55	55	277	147	86	0
LT Vol	0	0	0	277	0	86	0
Through Vol	288	0	0	0	0	0	0
RT Vol	0	55	55	0	147	0	0
Lane Flow Rate	400	76	76	330	175	95	0
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.727	0.124	0.086	0.648	0.285	0.212	0
Departure Headway (Hd)	6.542	5.832	4.074	7.072	5.864	8.062	7.548
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	552	612	871	511	611	443	0
Service Time	4.308	3.598	1.839	4.835	3.626	5.855	5.34
HCM Lane V/C Ratio	0.725	0.124	0.087	0.646	0.286	0.214	0
HCM Control Delay	24.9	9.4	7.2	22	11	13	10.3
HCM Lane LOS	C	A	A	C	B	B	N
HCM 95th-tile Q	6	0.4	0.3	4.6	1.2	0.8	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	344	269	645	770	164	357	241	223	176	318	199
Future Volume (vph)	141	344	269	645	770	164	357	241	223	176	318	199
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Lane Util. Factor	0.97	0.95	1.00	0.94	0.95		0.97	0.91	0.91	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.96	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1551	4990	3436		3433	3250	1417	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1551	4990	3436		3433	3250	1417	3433	3539	1583
Peak-hour factor, PHF	0.78	0.78	0.78	0.84	0.84	0.84	0.94	0.94	0.94	0.88	0.88	0.88
Adj. Flow (vph)	181	441	345	768	917	195	380	256	237	200	361	226
RTOR Reduction (vph)	0	0	262	0	9	0	0	17	117	0	0	187
Lane Group Flow (vph)	181	441	83	768	1103	0	380	324	35	200	361	39
Confl. Peds. (#/hr)			7			3			5			
Confl. Bikes (#/hr)			2			3						
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	11.4	25.7	25.7	36.2	50.5		18.7	27.9	27.9	12.1	20.9	20.9
Effective Green, g (s)	11.4	25.7	25.7	36.2	50.5		18.7	27.9	27.9	12.1	20.9	20.9
Actuated g/C Ratio	0.09	0.21	0.21	0.30	0.41		0.15	0.23	0.23	0.10	0.17	0.17
Clearance Time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	320	743	325	1477	1418		524	741	323	339	604	270
v/s Ratio Prot	0.05	c0.12		0.15	c0.32		c0.11	0.10		0.06	c0.10	
v/s Ratio Perm			0.05						0.02			0.02
v/c Ratio	0.57	0.59	0.25	0.52	0.78		0.73	0.44	0.11	0.59	0.60	0.14
Uniform Delay, d1	53.1	43.6	40.3	35.8	31.0		49.4	40.5	37.3	52.7	46.8	43.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	1.5	0.6	0.1	2.9		4.2	0.6	0.2	1.7	1.9	0.3
Delay (s)	54.4	45.1	40.9	35.9	34.0		53.6	41.0	37.5	54.4	48.7	43.4
Level of Service	D	D	D	D	C		D	D	D	D	D	D
Approach Delay (s)		45.3			34.8			45.9			48.6	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	41.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	122.3	Sum of lost time (s)	20.8
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	399	20	11	559	40	22
Future Vol, veh/h	399	20	11	559	40	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	75	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	434	22	12	608	43	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	434	0	1066	434
Stage 1	-	-	-	-	434	-
Stage 2	-	-	-	-	632	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1126	-	246	622
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	530	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1126	-	243	622
Mov Cap-2 Maneuver	-	-	-	-	243	-
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	524	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	18.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	243	622	-	-	1126	-
HCM Lane V/C Ratio	0.179	0.038	-	-	0.011	-
HCM Control Delay (s)	23	11	-	-	8.2	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.6	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	216	0	2	201
Future Vol, veh/h	0	3	216	0	2	201
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	3	235	0	2	218

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	458	235	0	0	235	0
Stage 1	235	-	-	-	-	-
Stage 2	223	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	561	804	-	-	1332	-
Stage 1	804	-	-	-	-	-
Stage 2	814	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	560	804	-	-	1332	-
Mov Cap-2 Maneuver	560	-	-	-	-	-
Stage 1	804	-	-	-	-	-
Stage 2	812	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	804	1332	-
HCM Lane V/C Ratio	-	-	0.004	0.002	-
HCM Control Delay (s)	-	-	9.5	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM 2010 Signalized Intersection Summary
1: Diablo Rd & El Cerro Blvd & Ackerman Dr

Timing Plan: School PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	400	45	526	453	7	92	27	553	2	20	5
Future Volume (veh/h)	7	400	45	526	453	7	92	27	553	2	20	5
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.98	1.00		0.97	1.00		0.93
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	8	435	49	572	492	8	100	29	601	3	27	7
Adj No. of Lanes	1	2	0	2	1	0	0	1	2	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	11	923	103	707	889	14	312	91	1179	5	49	13
Arrive On Green	0.01	0.29	0.29	0.21	0.49	0.49	0.22	0.22	0.22	0.04	0.04	0.04
Sat Flow, veh/h	1774	3209	360	3442	1827	30	1390	403	2702	143	1289	334
Grp Volume(v), veh/h	8	239	245	572	0	500	129	0	601	37	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1799	1721	0	1857	1793	0	1351	1767	0	0
Q Serve(g_s), s	0.3	7.3	7.4	10.4	0.0	12.4	3.9	0.0	10.7	1.3	0.0	0.0
Cycle Q Clear(g_c), s	0.3	7.3	7.4	10.4	0.0	12.4	3.9	0.0	10.7	1.3	0.0	0.0
Prop In Lane	1.00		0.20	1.00		0.02	0.78		1.00	0.08		0.19
Lane Grp Cap(c), veh/h	11	509	517	707	0	904	403	0	1179	68	0	0
V/C Ratio(X)	0.73	0.47	0.47	0.81	0.00	0.55	0.32	0.00	0.51	0.55	0.00	0.00
Avail Cap(c_a), veh/h	541	945	961	1838	0	991	684	0	1603	674	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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	32.5	19.2	19.3	24.8	0.0	11.8	21.2	0.0	13.7	31.0	0.0	0.0
Incr Delay (d2), s/veh	28.3	1.0	1.0	0.9	0.0	0.8	0.2	0.0	0.1	6.7	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	0.2	3.7	3.8	5.0	0.0	6.4	2.0	0.0	4.0	0.8	0.0	0.0
LnGrp Delay(d),s/veh	60.8	20.2	20.2	25.7	0.0	12.6	21.4	0.0	13.8	37.6	0.0	0.0
LnGrp LOS	E	C	C	C		B	C		B	D		
Approach Vol, veh/h		492			1072			730			37	
Approach Delay, s/veh		20.9			19.6			15.2			37.6	
Approach LOS		C			B			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	17.5	22.9		6.5	4.4	35.9		18.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	35.0	35.0		25.0	20.0	35.0		25.0
Max Q Clear Time (g_c+I1), s	12.4	9.4		3.3	2.3	14.4		12.7
Green Ext Time (p_c), s	1.1	9.5		0.1	0.0	8.6		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	18.8
HCM 2010 LOS	B

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	874	9	16	832	21	0	0	0	23	4	129
Future Volume (veh/h)	82	874	9	16	832	21	0	0	0	23	4	129
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98				1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	85	910	9	18	914	23				45	8	253
Adj No. of Lanes	1	2	0	1	2	0				0	1	0
Peak Hour Factor	0.96	0.96	0.96	0.91	0.91	0.91				0.51	0.51	0.51
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	110	1958	19	23	1749	44				58	10	326
Arrive On Green	0.06	0.55	0.55	0.01	0.50	0.50				0.25	0.25	0.25
Sat Flow, veh/h	1774	3590	36	1774	3525	89				228	41	1284
Grp Volume(v), veh/h	85	449	470	18	459	478				306	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1856	1774	1770	1844				1553	0	0
Q Serve(g_s), s	3.0	9.9	9.9	0.6	11.3	11.3				11.7	0.0	0.0
Cycle Q Clear(g_c), s	3.0	9.9	9.9	0.6	11.3	11.3				11.7	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.05				0.15		0.83
Lane Grp Cap(c), veh/h	110	965	1012	23	878	915				394	0	0
V/C Ratio(X)	0.77	0.46	0.46	0.79	0.52	0.52				0.78	0.00	0.00
Avail Cap(c_a), veh/h	556	1108	1162	556	1108	1155				535	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	29.5	8.8	8.8	31.4	10.9	10.9				22.1	0.0	0.0
Incr Delay (d2), s/veh	4.3	0.5	0.5	19.7	0.7	0.7				3.3	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
%ile BackOfQ(50%),veh/ln	1.6	4.9	5.1	0.4	5.6	5.9				5.4	0.0	0.0
LnGrp Delay(d),s/veh	33.8	9.3	9.3	51.2	11.6	11.6				25.4	0.0	0.0
LnGrp LOS	C	A	A	D	B	B				C		
Approach Vol, veh/h		1004			955						306	
Approach Delay, s/veh		11.4			12.4						25.4	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	4.8	38.8		20.2	8.0	35.7		
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s	20.0	40.0		22.0	20.0	40.0		
Max Q Clear Time (g_c+I1), s	2.6	11.9		13.7	5.0	13.3		
Green Ext Time (p_c), s	0.0	19.1		0.9	0.1	18.4		

Intersection Summary	
HCM 2010 Ctrl Delay	13.7
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
3: McCauley Rd/Green Valley Rd & Diablo Rd

Timing Plan: School PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	396	454	90	16	461	280	69	37	31	334	29	288
Future Volume (veh/h)	396	454	90	16	461	280	69	37	31	334	29	288
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.96	1.00		1.00	1.00		0.96
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	404	463	92	17	496	301	133	71	60	407	35	351
Adj No. of Lanes	1	1	0	1	2	1	1	1	0	0	1	1
Peak Hour Factor	0.98	0.98	0.98	0.93	0.93	0.93	0.52	0.52	0.52	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	451	684	136	20	744	739	179	94	80	434	37	806
Arrive On Green	0.25	0.45	0.45	0.01	0.21	0.21	0.10	0.10	0.10	0.26	0.26	0.26
Sat Flow, veh/h	1774	1509	300	1774	3539	1523	1774	932	787	1640	141	1526
Grp Volume(v), veh/h	404	0	555	17	496	301	133	0	131	442	0	351
Grp Sat Flow(s),veh/h/ln	1774	0	1809	1774	1770	1523	1774	0	1719	1781	0	1526
Q Serve(g_s), s	20.7	0.0	22.8	0.9	12.1	12.2	6.9	0.0	7.0	22.9	0.0	13.5
Cycle Q Clear(g_c), s	20.7	0.0	22.8	0.9	12.1	12.2	6.9	0.0	7.0	22.9	0.0	13.5
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.46	0.92		1.00
Lane Grp Cap(c), veh/h	451	0	819	20	744	739	179	0	174	472	0	806
V/C Ratio(X)	0.90	0.00	0.68	0.84	0.67	0.41	0.74	0.00	0.75	0.94	0.00	0.44
Avail Cap(c_a), veh/h	565	0	819	377	1315	985	395	0	383	473	0	807
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.9	0.0	20.3	46.5	34.2	16.2	41.1	0.0	41.2	33.9	0.0	14.2
Incr Delay (d2), s/veh	15.7	0.0	2.4	26.9	1.3	0.4	2.3	0.0	2.5	26.7	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.1	0.0	11.8	0.6	6.1	7.8	3.5	0.0	3.4	14.7	0.0	5.8
LnGrp Delay(d),s/veh	49.6	0.0	22.7	73.4	35.4	16.6	43.4	0.0	43.7	60.6	0.0	14.7
LnGrp LOS	D		C	E	D	B	D		D	E		B
Approach Vol, veh/h		959			814			264			793	
Approach Delay, s/veh		34.0			29.3			43.5			40.3	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.1	46.7		28.9	27.9	23.8		13.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	20.0	30.0		25.0	30.0	35.0		21.0
Max Q Clear Time (g_c+I1), s	2.9	24.8		24.9	22.7	14.2		9.0
Green Ext Time (p_c), s	0.0	3.6		0.1	1.2	5.6		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	35.3
HCM 2010 LOS	D

Notes

User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	47	57	48	643	581	73
Future Volume (vph)	47	57	48	643	581	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.96	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1701	1583	1770	1863	1828	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1701	1583	1770	1863	1828	
Peak-hour factor, PHF	0.55	0.55	0.93	0.93	0.79	0.79
Adj. Flow (vph)	85	104	52	691	735	92
RTOR Reduction (vph)	0	92	0	0	2	0
Lane Group Flow (vph)	85	12	52	691	825	0
Confl. Peds. (#/hr)	16					5
Confl. Bikes (#/hr)						3
Turn Type	Perm	Perm	Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases	4	4				
Actuated Green, G (s)	9.2	9.2	4.4	52.1	43.7	
Effective Green, g (s)	9.2	9.2	4.4	52.1	43.7	
Actuated g/C Ratio	0.11	0.11	0.05	0.64	0.53	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	1.8	1.8	1.8	3.0	3.0	
Lane Grp Cap (vph)	191	178	95	1186	976	
v/s Ratio Prot			0.03	c0.37	c0.45	
v/s Ratio Perm	c0.05	0.01				
v/c Ratio	0.45	0.07	0.55	0.58	0.84	
Uniform Delay, d1	33.9	32.5	37.7	8.6	16.2	
Progression Factor	1.00	1.00	1.00	1.00	0.49	
Incremental Delay, d2	0.6	0.1	3.4	0.7	4.9	
Delay (s)	34.5	32.5	41.2	9.3	12.8	
Level of Service	C	C	D	A	B	
Approach Delay (s)	33.4			11.5	12.8	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	81.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	89	17	599	91	20	565
Future Volume (vph)	89	17	599	91	20	565
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	1.00			1.00
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	0.98	1.00	1.00			1.00
Frt	1.00	0.85	0.98			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1727	1583	1825			1860
Flt Permitted	0.95	1.00	1.00			0.97
Satd. Flow (perm)	1727	1583	1825			1801
Peak-hour factor, PHF	0.88	0.88	0.93	0.93	0.79	0.79
Adj. Flow (vph)	101	19	644	98	25	715
RTOR Reduction (vph)	0	17	4	0	0	0
Lane Group Flow (vph)	101	2	738	0	0	740
Confl. Peds. (#/hr)	10					
Confl. Bikes (#/hr)				1		
Turn Type	Perm	Perm	NA		Perm	NA
Protected Phases			2			6
Permitted Phases	3	3			6	
Actuated Green, G (s)	8.5	8.5	52.1			43.7
Effective Green, g (s)	8.5	8.5	52.1			43.7
Actuated g/C Ratio	0.10	0.10	0.64			0.53
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	2.1	2.1	3.0			3.0
Lane Grp Cap (vph)	179	164	1162			962
v/s Ratio Prot			c0.40			
v/s Ratio Perm	c0.06	0.00				c0.41
v/c Ratio	0.56	0.01	0.64			0.77
Uniform Delay, d1	34.9	32.9	9.1			15.1
Progression Factor	1.00	1.00	0.27			1.00
Incremental Delay, d2	2.6	0.0	1.1			3.8
Delay (s)	37.5	32.9	3.5			18.8
Level of Service	D	C	A			B
Approach Delay (s)	36.8		3.5			18.8
Approach LOS	D		A			B

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	81.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	112.7
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	31	95	526	0	63	94	1	0	496	18	92
Future Vol, veh/h	0	31	95	526	0	63	94	1	0	496	18	92
Peak Hour Factor	0.92	0.69	0.69	0.69	0.92	0.88	0.88	0.88	0.92	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	45	138	762	0	72	107	1	0	577	21	107
Number of Lanes	0	1	1	1	0	1	2	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	3
HCM Control Delay	203.3	14.6	25.8
HCM LOS	F	B	D

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	93%	0%	100%	0%	0%	100%	0%	0%	15%	0%
Vol Thru, %	0%	7%	0%	0%	100%	0%	0%	100%	97%	85%	0%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	3%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	258	256	92	31	95	526	63	63	32	13	31
LT Vol	258	238	0	31	0	0	63	0	0	2	0
Through Vol	0	18	0	0	95	0	0	63	31	11	0
RT Vol	0	0	92	0	0	526	0	0	1	0	31
Lane Flow Rate	300	298	107	45	138	762	72	71	37	20	48
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.679	0.671	0.207	0.103	0.296	1.487	0.188	0.177	0.091	0.052	0.113
Departure Headway (Hd)	8.923	8.887	7.716	8.24	7.733	7.023	10.255	9.742	9.719	10.106	9.329
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	408	411	469	434	463	518	352	370	371	357	387
Service Time	6.623	6.587	5.416	6.019	5.512	4.802	7.955	7.442	7.419	7.806	7.029
HCM Lane V/C Ratio	0.735	0.725	0.228	0.104	0.298	1.471	0.205	0.192	0.1	0.056	0.124
HCM Control Delay	28.5	27.9	12.4	12	13.8	248.8	15.3	14.5	13.4	13.4	13.2
HCM Lane LOS	D	D	B	B	B	F	C	B	B	B	B
HCM 95th-tile Q	4.9	4.8	0.8	0.3	1.2	38.2	0.7	0.6	0.3	0.2	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↰	↱
Traffic Vol, veh/h	0	2	11	31
Future Vol, veh/h	0	2	11	31
Peak Hour Factor	0.92	0.65	0.65	0.65
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	3	17	48
Number of Lanes	0	0	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	13.3
HCM LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	287	43	76	506	9	135	3	90	100	15	47
Future Volume (veh/h)	10	287	43	76	506	9	135	3	90	100	15	47
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.80	1.00		0.67	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	12	346	52	90	602	11	229	5	153	256	38	121
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.83	0.83	0.83	0.84	0.84	0.84	0.59	0.59	0.59	0.39	0.39	0.39
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	15	600	495	116	706	481	269	9	287	292	113	358
Arrive On Green	0.01	0.32	0.32	0.07	0.38	0.38	0.15	0.27	0.27	0.16	0.29	0.29
Sat Flow, veh/h	1774	1863	1538	1774	1863	1270	1774	34	1049	1774	392	1250
Grp Volume(v), veh/h	12	346	52	90	602	11	229	0	158	256	0	159
Grp Sat Flow(s),veh/h/ln	1774	1863	1538	1774	1863	1270	1774	0	1083	1774	0	1642
Q Serve(g_s), s	0.6	14.7	2.2	4.7	28.1	0.5	11.9	0.0	11.8	13.3	0.0	7.2
Cycle Q Clear(g_c), s	0.6	14.7	2.2	4.7	28.1	0.5	11.9	0.0	11.8	13.3	0.0	7.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.76
Lane Grp Cap(c), veh/h	15	600	495	116	706	481	269	0	296	292	0	471
V/C Ratio(X)	0.79	0.58	0.11	0.78	0.85	0.02	0.85	0.00	0.53	0.88	0.00	0.34
Avail Cap(c_a), veh/h	562	786	649	562	786	536	468	0	343	468	0	520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.9	26.7	22.5	43.6	27.0	18.4	39.1	0.0	29.3	38.6	0.0	26.7
Incr Delay (d2), s/veh	27.5	1.3	0.1	4.1	8.8	0.0	7.4	0.0	1.5	6.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	7.7	1.0	2.5	16.1	0.2	6.4	0.0	3.6	7.1	0.0	3.3
LnGrp Delay(d),s/veh	74.4	28.0	22.7	47.7	35.8	18.5	46.6	0.0	30.7	45.1	0.0	26.8
LnGrp LOS	E	C	C	D	D	B	D		C	D		C
Approach Vol, veh/h		410			703			387			415	
Approach Delay, s/veh		28.7			37.1			40.1			38.1	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	35.0	19.6	29.9	4.8	40.4	18.4	31.2
Change Period (Y+Rc), s	4.0	4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	30.0	40.0	25.0	30.0	30.0	40.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	6.7	16.7	15.3	13.8	2.6	30.1	13.9	9.2
Green Ext Time (p_c), s	0.1	10.1	0.3	1.8	0.0	5.8	0.5	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.1
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	81.1
Intersection LOS	F

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Lane Configurations									
Traffic Vol, veh/h	0	101	587	0	435	41	0	69	182
Future Vol, veh/h	0	101	587	0	435	41	0	69	182
Peak Hour Factor	0.92	0.86	0.86	0.92	0.90	0.90	0.92	0.73	0.73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	117	683	0	483	46	0	95	249
Number of Lanes	0	1	1	0	1	0	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	128.5	51.8	15.7
HCM LOS	F	F	C

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	91%	0%	0%
Vol Right, %	0%	0%	9%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	587	476	69	182
LT Vol	101	0	0	69	0
Through Vol	0	587	435	0	0
RT Vol	0	0	41	0	182
Lane Flow Rate	117	683	529	95	249
Geometry Grp	7	7	4	7	7
Degree of Util (X)	0.232	1.25	0.942	0.213	0.477
Departure Headway (Hd)	7.103	6.592	6.748	8.547	7.306
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	505	553	539	423	496
Service Time	4.849	4.338	4.748	6.247	5.006
HCM Lane V/C Ratio	0.232	1.235	0.981	0.225	0.502
HCM Control Delay	12	148.6	51.8	13.5	16.5
HCM Lane LOS	B	F	F	B	C
HCM 95th-tile Q	0.9	26.5	11.9	0.8	2.5

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	34	409	35	40	46	0	0	45	24
Future Vol, veh/h	0	0	0	34	409	35	40	46	0	0	45	24
Conflicting Peds, #/hr	0	0	0	1	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	82	82	82	77	77	77	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	41	499	43	52	60	0	0	63	33

Major/Minor	Major2			Minor1		Minor2			
Conflicting Flow All	1	0	0	652	625	-	-	604	520
Stage 1	-	-	-	1	1	-	-	603	-
Stage 2	-	-	-	651	624	-	-	1	-
Critical Hdwy	4.12	-	-	7.12	6.52	-	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-	-	-	-
Follow-up Hdwy	2.218	-	-	3.518	4.018	-	-	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	381	401	0	0	412	556
Stage 1	-	-	-	-	-	0	0	488	-
Stage 2	-	-	-	457	478	0	0	-	-
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	1622	-	-	306	386	-	-	397	556
Mov Cap-2 Maneuver	-	-	-	306	386	-	-	397	-
Stage 1	-	-	-	-	-	-	-	470	-
Stage 2	-	-	-	359	461	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0.5	17.5	15.4
HCM LOS		C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	306	386	1622	-	-	441
HCM Lane V/C Ratio	0.17	0.155	0.026	-	-	0.217
HCM Control Delay (s)	19.2	16	7.3	0	-	15.4
HCM Lane LOS	C	C	A	A	-	C
HCM 95th %tile Q(veh)	0.6	0.5	0.1	-	-	0.8

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	46	490	66	0	0	0	0	40	40	43	36	0
Future Vol, veh/h	46	490	66	0	0	0	0	40	40	43	36	0
Conflicting Peds, #/hr	0	0	1	0	0	0	0	0	2	2	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	85	-	100	0	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	92	92	92	77	77	77	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	55	583	79	0	0	0	0	52	52	60	50	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	0	0	0	-	733	626	760	772	-
Stage 1	-	-	-	-	733	-	0	0	-
Stage 2	-	-	-	-	0	-	760	772	-
Critical Hdwy	4.12	-	-	-	6.52	6.22	7.12	6.52	-
Critical Hdwy Stg 1	-	-	-	-	5.52	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	-	4.018	3.318	3.518	4.018	-
Pot Cap-1 Maneuver	-	-	-	0	348	484	323	330	0
Stage 1	-	-	-	0	426	-	-	-	0
Stage 2	-	-	-	0	-	-	398	409	0
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	-	348	484	255	330	-
Mov Cap-2 Maneuver	-	-	-	-	348	-	255	330	-
Stage 1	-	-	-	-	426	-	-	-	-
Stage 2	-	-	-	-	-	-	312	409	-

Approach	EB	NB	SB
HCM Control Delay, s		14.8	20.8
HCM LOS		B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	SBLn1	SBLn2
Capacity (veh/h)	348	348	484	-	-	-	255	330
HCM Lane V/C Ratio	0.075	0.075	0.107	-	-	-	0.234	0.152
HCM Control Delay (s)	16.2	16.2	13.3	-	-	-	23.4	17.8
HCM Lane LOS	C	C	B	-	-	-	C	C
HCM 95th %tile Q(veh)	0.2	0.2	0.4	-	-	-	0.9	0.5

Intersection	
Intersection Delay, s/veh	16.2
Intersection LOS	C

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations									
Traffic Vol, veh/h	0	219	136	0	371	325	0	127	0
Future Vol, veh/h	0	219	136	0	371	325	0	127	0
Peak Hour Factor	0.92	0.94	0.94	0.92	0.92	0.92	0.92	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	233	145	0	403	353	0	153	0
Number of Lanes	0	1	1	0	1	2	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	15	17.1	14.8
HCM LOS	B	C	B

Lane	NBLn1	NBLn2	NBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	371	163	163	219	136	127	0
LT Vol	0	0	0	219	0	127	0
Through Vol	371	0	0	0	0	0	0
RT Vol	0	163	163	0	136	0	0
Lane Flow Rate	403	177	177	233	145	153	0
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.718	0.28	0.193	0.487	0.254	0.338	0
Departure Headway (Hd)	6.408	5.699	3.941	7.522	6.309	7.951	7.439
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	561	627	901	478	566	450	0
Service Time	4.18	3.47	1.711	5.295	4.082	5.749	5.236
HCM Lane V/C Ratio	0.718	0.282	0.196	0.487	0.256	0.34	0
HCM Control Delay	24	10.7	7.7	17.3	11.2	14.8	10.2
HCM Lane LOS	C	B	A	C	B	B	N
HCM 95th-tile Q	5.9	1.1	0.7	2.6	1	1.5	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	652	264	392	495	246	385	521	412	311	401	184
Future Volume (vph)	215	652	264	392	495	246	385	521	412	311	401	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Lane Util. Factor	0.97	0.95	1.00	0.94	0.95		0.97	0.91	0.91	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.97	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1562	4990	3343		3433	3279	1417	3433	3539	1561
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1562	4990	3343		3433	3279	1417	3433	3539	1561
Peak-hour factor, PHF	0.88	0.88	0.88	0.87	0.87	0.87	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	244	741	300	451	569	283	418	566	448	357	461	211
RTOR Reduction (vph)	0	0	202	0	40	0	0	13	223	0	0	157
Lane Group Flow (vph)	244	741	98	451	812	0	418	692	86	357	461	54
Confl. Peds. (#/hr)						3			5			2
Confl. Bikes (#/hr)			2			3						
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	12.5	30.1	30.1	14.7	32.3		18.1	31.4	31.4	16.2	29.1	29.1
Effective Green, g (s)	12.5	30.1	30.1	14.7	32.3		18.1	31.4	31.4	16.2	29.1	29.1
Actuated g/C Ratio	0.11	0.27	0.27	0.13	0.29		0.16	0.28	0.28	0.14	0.26	0.26
Clearance Time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	380	944	416	650	957		550	912	394	493	912	402
v/s Ratio Prot	0.07	c0.21		0.09	c0.24		c0.12	c0.21		0.10	0.13	
v/s Ratio Perm			0.06						0.06			0.03
v/c Ratio	0.64	0.78	0.23	0.69	0.85		0.76	0.76	0.22	0.72	0.51	0.14
Uniform Delay, d1	48.0	38.3	32.3	46.9	37.9		45.3	37.2	31.3	46.2	35.7	32.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.8	4.6	0.4	2.6	7.4		5.5	3.9	0.4	4.4	0.6	0.2
Delay (s)	50.8	42.9	32.7	49.5	45.3		50.8	41.1	31.7	50.6	36.3	32.4
Level of Service	D	D	C	D	D		D	D	C	D	D	C
Approach Delay (s)		42.1			46.8			41.9			40.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	112.8	Sum of lost time (s)	20.8
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	625	31	19	454	20	13
Future Vol, veh/h	625	31	19	454	20	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	75	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	679	34	21	493	22	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	679	0	1214	679
Stage 1	-	-	-	-	679	-
Stage 2	-	-	-	-	535	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	913	-	201	452
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	587	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	913	-	196	452
Mov Cap-2 Maneuver	-	-	-	-	196	-
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	573	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	20.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	196	452	-	-	913	-
HCM Lane V/C Ratio	0.111	0.031	-	-	0.023	-
HCM Control Delay (s)	25.6	13.2	-	-	9	-
HCM Lane LOS	D	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	135	0	2	133
Future Vol, veh/h	0	2	135	0	2	133
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	147	0	2	145

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	296	147	0	0	147	0
Stage 1	147	-	-	-	-	-
Stage 2	149	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	695	900	-	-	1435	-
Stage 1	880	-	-	-	-	-
Stage 2	879	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	694	900	-	-	1435	-
Mov Cap-2 Maneuver	694	-	-	-	-	-
Stage 1	880	-	-	-	-	-
Stage 2	877	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	900	1435	-
HCM Lane V/C Ratio	-	-	0.002	0.002	-
HCM Control Delay (s)	-	-	9	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	344	58	443	267	2	63	26	695	7	16	6
Future Volume (veh/h)	2	344	58	443	267	2	63	26	695	7	16	6
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.96	1.00		0.94
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	2	391	66	492	297	2	71	29	781	12	27	10
Adj No. of Lanes	1	2	0	2	1	0	0	1	2	0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.90	0.90	0.90	0.89	0.89	0.89	0.60	0.60	0.60
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	765	128	620	797	5	362	148	1262	19	43	16
Arrive On Green	0.00	0.25	0.25	0.18	0.43	0.43	0.28	0.28	0.28	0.04	0.04	0.04
Sat Flow, veh/h	1774	3027	507	3442	1848	12	1277	522	2684	429	965	357
Grp Volume(v), veh/h	2	227	230	492	0	299	100	0	781	49	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1764	1721	0	1860	1799	0	1342	1751	0	0
Q Serve(g_s), s	0.1	7.4	7.5	9.2	0.0	7.3	2.8	0.0	14.7	1.8	0.0	0.0
Cycle Q Clear(g_c), s	0.1	7.4	7.5	9.2	0.0	7.3	2.8	0.0	14.7	1.8	0.0	0.0
Prop In Lane	1.00		0.29	1.00		0.01	0.71		1.00	0.24		0.20
Lane Grp Cap(c), veh/h	3	447	446	620	0	802	509	0	1262	79	0	0
V/C Ratio(X)	0.69	0.51	0.52	0.79	0.00	0.37	0.20	0.00	0.62	0.62	0.00	0.00
Avail Cap(c_a), veh/h	530	925	922	1799	0	972	672	0	1505	654	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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	33.4	21.4	21.5	26.2	0.0	12.9	18.2	0.0	13.6	31.4	0.0	0.0
Incr Delay (d2), s/veh	72.4	1.3	1.3	0.9	0.0	0.4	0.1	0.0	0.3	7.8	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	0.1	3.8	3.8	4.4	0.0	3.8	1.4	0.0	5.5	1.1	0.0	0.0
LnGrp Delay(d),s/veh	105.8	22.7	22.8	27.1	0.0	13.3	18.3	0.0	13.9	39.2	0.0	0.0
LnGrp LOS	F	C	C	C		B	B		B	D		
Approach Vol, veh/h		459			791			881			49	
Approach Delay, s/veh		23.1			21.9			14.4			39.2	
Approach LOS		C			C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.1	20.9		7.0	4.1	32.9		23.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	35.0	35.0		25.0	20.0	35.0		25.0
Max Q Clear Time (g_c+I1), s	11.2	9.5		3.8	2.1	9.3		16.7
Green Ext Time (p_c), s	0.9	6.9		0.2	0.0	6.9		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	940	11	10	625	9	0	0	0	17	0	35
Future Volume (veh/h)	57	940	11	10	625	9	0	0	0	17	0	35
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98				1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	63	1044	12	11	687	10				21	0	43
Adj No. of Lanes	1	2	0	1	2	0				0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91				0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	78	2324	27	15	2189	32				34	0	69
Arrive On Green	0.04	0.65	0.65	0.01	0.61	0.61				0.06	0.00	0.06
Sat Flow, veh/h	1774	3583	41	1774	3570	52				523	0	1071
Grp Volume(v), veh/h	63	516	540	11	340	357				64	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1854	1774	1770	1852				1594	0	0
Q Serve(g_s), s	1.5	6.2	6.2	0.3	4.0	4.0				1.7	0.0	0.0
Cycle Q Clear(g_c), s	1.5	6.2	6.2	0.3	4.0	4.0				1.7	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.03				0.33		0.67
Lane Grp Cap(c), veh/h	78	1148	1203	15	1085	1136				103	0	0
V/C Ratio(X)	0.81	0.45	0.45	0.72	0.31	0.31				0.62	0.00	0.00
Avail Cap(c_a), veh/h	823	1641	1720	823	1641	1717				813	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	20.4	3.8	3.8	21.3	4.0	4.0				19.7	0.0	0.0
Incr Delay (d2), s/veh	7.3	0.4	0.4	21.1	0.2	0.2				2.3	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
%ile BackOfQ(50%),veh/ln	0.9	3.1	3.3	0.2	2.0	2.1				0.8	0.0	0.0
LnGrp Delay(d),s/veh	27.7	4.2	4.1	42.4	4.2	4.2				21.9	0.0	0.0
LnGrp LOS	C	A	A	D	A	A				C		
Approach Vol, veh/h		1119			708						64	
Approach Delay, s/veh		5.5			4.8						21.9	
Approach LOS		A			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	4.4	32.0		6.8	5.9	30.5		
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s	20.0	40.0		22.0	20.0	40.0		
Max Q Clear Time (g_c+I1), s	2.3	8.2		3.7	3.5	6.0		
Green Ext Time (p_c), s	0.0	19.6		0.2	0.1	20.5		

Intersection Summary	
HCM 2010 Ctrl Delay	5.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	538	357	65	14	335	377	51	24	8	185	14	231
Future Volume (veh/h)	538	357	65	14	335	377	51	24	8	185	14	231
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.96	1.00		1.00	1.00		0.99
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	598	397	72	15	364	410	60	28	9	226	17	282
Adj No. of Lanes	1	1	0	1	2	1	1	1	0	0	1	1
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.85	0.85	0.85	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	644	951	172	18	942	692	88	67	21	301	23	861
Arrive On Green	0.36	0.62	0.62	0.01	0.27	0.27	0.05	0.05	0.05	0.18	0.18	0.18
Sat Flow, veh/h	1774	1535	278	1774	3539	1518	1774	1352	434	1655	125	1573
Grp Volume(v), veh/h	598	0	469	15	364	410	60	0	37	243	0	282
Grp Sat Flow(s),veh/h/ln	1774	0	1814	1774	1770	1518	1774	0	1786	1780	0	1573
Q Serve(g_s), s	37.2	0.0	15.2	1.0	9.7	23.5	3.8	0.0	2.3	14.9	0.0	11.4
Cycle Q Clear(g_c), s	37.2	0.0	15.2	1.0	9.7	23.5	3.8	0.0	2.3	14.9	0.0	11.4
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.24	0.93		1.00
Lane Grp Cap(c), veh/h	644	0	1123	18	942	692	88	0	88	324	0	861
V/C Ratio(X)	0.93	0.00	0.42	0.85	0.39	0.59	0.69	0.00	0.42	0.75	0.00	0.33
Avail Cap(c_a), veh/h	772	0	1123	232	1387	883	386	0	389	775	0	1260
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.1	0.0	11.2	56.8	34.5	24.0	53.7	0.0	53.0	44.5	0.0	14.5
Incr Delay (d2), s/veh	16.4	0.0	0.3	31.8	0.3	1.0	3.5	0.0	1.2	4.9	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.0	0.0	7.6	0.6	4.7	13.1	2.0	0.0	1.2	7.7	0.0	5.0
LnGrp Delay(d),s/veh	51.5	0.0	11.5	88.5	34.8	24.9	57.2	0.0	54.2	49.4	0.0	14.8
LnGrp LOS	D		B	F	C	C	E		D	D		B
Approach Vol, veh/h		1067			789			97			525	
Approach Delay, s/veh		33.9			30.7			56.0			30.8	
Approach LOS		C			C			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.1	75.1		24.9	45.7	34.6		9.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	15.0	40.0		50.0	50.0	45.0		25.0
Max Q Clear Time (g_c+I1), s	3.0	17.2		16.9	39.2	25.5		5.8
Green Ext Time (p_c), s	0.0	8.9		4.0	2.5	5.1		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	33.1
HCM 2010 LOS	C

Notes

User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	28	21	32	922	425	29
Future Volume (vph)	28	21	32	922	425	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1761	1583	1770	1863	1842	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1761	1583	1770	1863	1842	
Peak-hour factor, PHF	0.72	0.72	0.91	0.91	0.88	0.88
Adj. Flow (vph)	39	29	35	1013	483	33
RTOR Reduction (vph)	0	27	0	0	1	0
Lane Group Flow (vph)	39	2	35	1013	515	0
Confl. Peds. (#/hr)	2					6
Confl. Bikes (#/hr)						3
Turn Type	Perm	Perm	Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases	4	4				
Actuated Green, G (s)	5.2	5.2	3.7	54.8	47.1	
Effective Green, g (s)	5.2	5.2	3.7	54.8	47.1	
Actuated g/C Ratio	0.07	0.07	0.05	0.70	0.60	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	1.8	1.8	1.8	3.0	3.0	
Lane Grp Cap (vph)	116	104	83	1300	1105	
v/s Ratio Prot			0.02	c0.54	0.28	
v/s Ratio Perm	c0.02	0.00				
v/c Ratio	0.34	0.02	0.42	0.78	0.47	
Uniform Delay, d1	35.0	34.3	36.4	7.8	8.7	
Progression Factor	1.00	1.00	1.00	1.00	0.44	
Incremental Delay, d2	0.6	0.0	1.3	3.0	0.3	
Delay (s)	35.6	34.3	37.6	10.9	4.1	
Level of Service	D	C	D	B	A	
Approach Delay (s)	35.1			11.8	4.1	
Approach LOS	D			B	A	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	78.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	57	19	861	89	26	397
Future Volume (vph)	57	19	861	89	26	397
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	1.00			1.00
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	0.99			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1770	1583	1836			1857
Flt Permitted	0.95	1.00	1.00			0.90
Satd. Flow (perm)	1770	1583	1836			1680
Peak-hour factor, PHF	0.76	0.76	0.91	0.91	0.88	0.88
Adj. Flow (vph)	75	25	946	98	30	451
RTOR Reduction (vph)	0	23	2	0	0	0
Lane Group Flow (vph)	75	2	1042	0	0	481
Confl. Bikes (#/hr)				1		
Turn Type	Perm	Perm	NA		Perm	NA
Protected Phases			2			6
Permitted Phases	3	3			6	
Actuated Green, G (s)	6.5	6.5	54.8			47.1
Effective Green, g (s)	6.5	6.5	54.8			47.1
Actuated g/C Ratio	0.08	0.08	0.70			0.60
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	2.1	2.1	3.0			3.0
Lane Grp Cap (vph)	146	131	1281			1008
v/s Ratio Prot			c0.57			
v/s Ratio Perm	c0.04	0.00				0.29
v/c Ratio	0.51	0.02	0.81			0.48
Uniform Delay, d1	34.5	33.1	8.3			8.8
Progression Factor	1.00	1.00	0.25			1.00
Incremental Delay, d2	1.5	0.0	3.5			0.4
Delay (s)	36.0	33.1	5.5			9.2
Level of Service	D	C	A			A
Approach Delay (s)	35.2		5.5			9.2
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	78.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	39.5
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	18	82	349	0	79	63	3	0	765	18	78
Future Vol, veh/h	0	18	82	349	0	79	63	3	0	765	18	78
Peak Hour Factor	0.92	0.87	0.87	0.87	0.92	0.72	0.72	0.72	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	21	94	401	0	110	88	4	0	832	20	85
Number of Lanes	0	1	1	1	0	1	2	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	3
HCM Control Delay	32.6	14.7	50.2
HCM LOS	D	B	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	95%	0%	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	0%	5%	0%	0%	100%	0%	0%	100%	88%	100%	0%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	12%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	390	393	78	18	82	349	79	42	24	8	23
LT Vol	390	375	0	18	0	0	79	0	0	0	0
Through Vol	0	18	0	0	82	0	0	42	21	8	0
RT Vol	0	0	78	0	0	349	0	0	3	0	23
Lane Flow Rate	424	427	85	21	94	401	110	58	33	13	38
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.926	0.93	0.157	0.05	0.215	0.836	0.291	0.146	0.083	0.035	0.092
Departure Headway (Hd)	7.862	7.839	6.658	8.725	8.217	7.506	9.538	9.028	8.938	9.367	8.667
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	462	461	538	411	437	481	376	397	400	381	412
Service Time	5.613	5.59	4.408	6.474	5.966	5.255	7.307	6.796	6.706	7.148	6.448
HCM Lane V/C Ratio	0.918	0.926	0.158	0.051	0.215	0.834	0.293	0.146	0.083	0.034	0.092
HCM Control Delay	53.8	54.4	10.7	11.9	13.2	38.2	16.2	13.3	12.5	12.5	12.3
HCM Lane LOS	F	F	B	B	B	E	C	B	B	B	B
HCM 95th-tile Q	10.6	10.8	0.6	0.2	0.8	8.3	1.2	0.5	0.3	0.1	0.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↰	↱
Traffic Vol, veh/h	0	0	8	23
Future Vol, veh/h	0	0	8	23
Peak Hour Factor	0.92	0.60	0.60	0.60
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	0	13	38
Number of Lanes	0	0	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	12.4
HCM LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	286	45	123	741	1	52	6	121	18	0	8
Future Volume (veh/h)	1	286	45	123	741	1	52	6	121	18	0	8
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.95	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	1	304	48	129	780	1	88	10	205	44	0	20
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.59	0.59	0.59	0.41	0.41	0.41
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	772	638	166	945	797	116	15	318	55	0	293
Arrive On Green	0.00	0.41	0.41	0.09	0.51	0.51	0.07	0.22	0.22	0.03	0.00	0.19
Sat Flow, veh/h	1774	1863	1541	1774	1863	1571	1774	70	1444	1774	0	1583
Grp Volume(v), veh/h	1	304	48	129	780	1	88	0	215	44	0	20
Grp Sat Flow(s),veh/h/ln	1774	1863	1541	1774	1863	1571	1774	0	1514	1774	0	1583
Q Serve(g_s), s	0.0	7.8	1.3	4.9	24.3	0.0	3.3	0.0	8.8	1.7	0.0	0.7
Cycle Q Clear(g_c), s	0.0	7.8	1.3	4.9	24.3	0.0	3.3	0.0	8.8	1.7	0.0	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.95	1.00		1.00
Lane Grp Cap(c), veh/h	3	772	638	166	945	797	116	0	333	55	0	293
V/C Ratio(X)	0.39	0.39	0.08	0.77	0.83	0.00	0.76	0.00	0.65	0.80	0.00	0.07
Avail Cap(c_a), veh/h	777	1088	900	777	1088	918	648	0	663	648	0	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.2	14.0	12.1	30.3	14.3	8.3	31.5	0.0	24.3	33.0	0.0	23.0
Incr Delay (d2), s/veh	31.5	0.5	0.1	2.9	5.1	0.0	9.5	0.0	2.1	9.7	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	0.0	4.1	0.6	2.5	13.7	0.0	1.9	0.0	3.9	1.0	0.0	0.3
LnGrp Delay(d),s/veh	65.6	14.5	12.2	33.2	19.4	8.3	41.0	0.0	26.4	42.7	0.0	23.1
LnGrp LOS	E	B	B	C	B	A	D		C	D		C
Approach Vol, veh/h		353			910			303			64	
Approach Delay, s/veh		14.3			21.4			30.6			36.6	
Approach LOS		B			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	32.9	6.1	19.1	4.1	39.2	8.5	16.7
Change Period (Y+Rc), s	4.0	4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	30.0	40.0	25.0	30.0	30.0	40.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	6.9	9.8	3.7	10.8	2.0	26.3	5.3	2.7
Green Ext Time (p_c), s	0.2	13.8	0.0	1.4	0.0	8.4	0.2	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	22.2
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	25.7
Intersection LOS	D

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Lane Configurations									
Traffic Vol, veh/h	0	52	414	0	490	28	0	34	73
Future Vol, veh/h	0	52	414	0	490	28	0	34	73
Peak Hour Factor	0.92	0.82	0.82	0.92	0.94	0.94	0.92	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	63	505	0	521	30	0	43	92
Number of Lanes	0	1	1	0	1	0	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	24	31.2	10.9
HCM LOS	C	D	B

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	95%	0%	0%
Vol Right, %	0%	0%	5%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	52	414	518	34	73
LT Vol	52	0	0	34	0
Through Vol	0	414	490	0	0
RT Vol	0	0	28	0	73
Lane Flow Rate	63	505	551	43	92
Geometry Grp	7	7	4	7	7
Degree of Util (X)	0.108	0.786	0.844	0.093	0.169
Departure Headway (Hd)	6.111	5.604	5.515	7.796	6.567
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	587	646	656	460	546
Service Time	3.839	3.333	3.544	5.543	4.314
HCM Lane V/C Ratio	0.107	0.782	0.84	0.093	0.168
HCM Control Delay	9.6	25.8	31.2	11.3	10.7
HCM Lane LOS	A	D	D	B	B
HCM 95th-tile Q	0.4	7.6	9.3	0.3	0.6

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	58	461	44	30	37	0	0	22	22
Future Vol, veh/h	0	0	0	58	461	44	30	37	0	0	22	22
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	0	0	0	2
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	66	66	66	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	63	501	48	45	56	0	0	24	24

Major/Minor	Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	677	675	-	-	651	527
Stage 1	-	-	-	0	0	-	-	651	-
Stage 2	-	-	-	677	675	-	-	0	-
Critical Hdwy	4.12	-	-	7.12	6.52	-	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-	-	-	-
Follow-up Hdwy	2.218	-	-	3.518	4.018	-	-	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	367	376	0	0	388	551
Stage 1	-	-	-	-	-	0	0	465	-
Stage 2	-	-	-	443	453	0	0	-	-
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	335	376	-	-	388	551
Mov Cap-2 Maneuver	-	-	-	335	376	-	-	388	-
Stage 1	-	-	-	-	-	-	-	465	-
Stage 2	-	-	-	402	453	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		16.7	13.8
HCM LOS		C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	335	376	-	-	-	455
HCM Lane V/C Ratio	0.136	0.149	-	-	-	0.105
HCM Control Delay (s)	17.4	16.2	-	-	-	13.8
HCM Lane LOS	C	C	-	-	-	B
HCM 95th %tile Q(veh)	0.5	0.5	-	-	-	0.4

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	321	47	0	0	0	0	31	27	20	60	0
Future Vol, veh/h	36	321	47	0	0	0	0	31	27	20	60	0
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	3	3	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	85	-	100	0	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	92	92	92	66	66	66	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	391	57	0	0	0	0	47	41	22	65	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	0	0	0	-	510	425	534	539	-
Stage 1	-	-	-	-	510	-	0	0	-
Stage 2	-	-	-	-	0	-	534	539	-
Critical Hdwy	4.12	-	-	-	6.52	6.22	7.12	6.52	-
Critical Hdwy Stg 1	-	-	-	-	5.52	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	-	4.018	3.318	3.518	4.018	-
Pot Cap-1 Maneuver	-	-	-	0	467	629	457	449	0
Stage 1	-	-	-	0	538	-	-	-	0
Stage 2	-	-	-	0	-	-	530	522	0
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	-	466	628	394	448	-
Mov Cap-2 Maneuver	-	-	-	-	466	-	394	448	-
Stage 1	-	-	-	-	537	-	-	-	-
Stage 2	-	-	-	-	-	-	452	521	-

Approach	EB	NB	SB
HCM Control Delay, s		12.2	14.5
HCM LOS		B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	SBLn1	SBLn2
Capacity (veh/h)	466	466	628	-	-	-	394	448
HCM Lane V/C Ratio	0.05	0.05	0.065	-	-	-	0.055	0.146
HCM Control Delay (s)	13.1	13.1	11.1	-	-	-	14.7	14.4
HCM Lane LOS	B	B	B	-	-	-	B	B
HCM 95th %tile Q(veh)	0.2	0.2	0.2	-	-	-	0.2	0.5

Intersection	
Intersection Delay, s/veh	26.4
Intersection LOS	D

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations									
Traffic Vol, veh/h	0	214	75	0	517	307	0	81	0
Future Vol, veh/h	0	214	75	0	517	307	0	81	0
Peak Hour Factor	0.92	0.89	0.89	0.92	0.95	0.95	0.92	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	240	84	0	544	323	0	99	0
Number of Lanes	0	1	1	0	1	2	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	15.9	31.8	13.1
HCM LOS	C	D	B

Lane	NBLn1	NBLn2	NBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	517	154	154	214	75	81	0
LT Vol	0	0	0	214	0	81	0
Through Vol	517	0	0	0	0	0	0
RT Vol	0	154	154	0	75	0	0
Lane Flow Rate	544	162	162	240	84	99	0
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.926	0.243	0.164	0.506	0.149	0.221	0
Departure Headway (Hd)	6.126	5.418	3.665	7.578	6.367	8.037	7.525
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	593	661	971	474	561	445	0
Service Time	3.882	3.174	1.419	5.341	4.13	5.823	5.311
HCM Lane V/C Ratio	0.917	0.245	0.167	0.506	0.15	0.222	0
HCM Control Delay	45.6	9.9	7.1	17.9	10.3	13.1	10.3
HCM Lane LOS	E	A	A	C	B	B	N
HCM 95th-tile Q	11.8	0.9	0.6	2.8	0.5	0.8	0

HCM Signalized Intersection Capacity Analysis
10: Crow Canyon Rd/Blackhawk Rd & Camino Tassajara

Timing Plan: PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	221	654	256	384	489	310	417	577	494	250	340	178
Future Volume (vph)	221	654	256	384	489	310	417	577	494	250	340	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Lane Util. Factor	0.97	0.95	1.00	0.94	0.95		0.97	0.91	0.91	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.97	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1555	4990	3312		3433	3266	1422	3433	3539	1563
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1555	4990	3312		3433	3266	1422	3433	3539	1563
Peak-hour factor, PHF	0.89	0.89	0.89	0.88	0.88	0.88	0.91	0.91	0.91	0.98	0.98	0.98
Adj. Flow (vph)	248	735	288	436	556	352	458	634	543	255	347	182
RTOR Reduction (vph)	0	0	192	0	64	0	0	16	253	0	0	140
Lane Group Flow (vph)	248	735	96	436	844	0	458	803	105	255	347	42
Confl. Peds. (#/hr)			5			2			1			1
Confl. Bikes (#/hr)			2			3						
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	12.6	31.2	31.2	14.7	33.3		19.2	32.7	32.7	12.8	25.9	25.9
Effective Green, g (s)	12.6	31.2	31.2	14.7	33.3		19.2	32.7	32.7	12.8	25.9	25.9
Actuated g/C Ratio	0.11	0.28	0.28	0.13	0.30		0.17	0.29	0.29	0.11	0.23	0.23
Clearance Time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	386	987	433	656	986		589	955	415	393	819	362
v/s Ratio Prot	0.07	c0.21		0.09	c0.25		c0.13	c0.25		0.07	0.10	
v/s Ratio Perm			0.06						0.07			0.03
v/c Ratio	0.64	0.74	0.22	0.66	0.86		0.78	0.84	0.25	0.65	0.42	0.12
Uniform Delay, d1	47.4	36.7	31.0	46.2	37.0		44.3	37.1	30.2	47.4	36.6	33.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.7	3.3	0.4	2.0	7.7		5.9	7.0	0.4	2.8	0.5	0.2
Delay (s)	50.2	40.0	31.3	48.2	44.7		50.1	44.1	30.7	50.1	37.1	34.1
Level of Service	D	D	C	D	D		D	D	C	D	D	C
Approach Delay (s)		40.0			45.8			42.9			40.6	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	111.8	Sum of lost time (s)	20.8
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	420	28	15	498	16	9
Future Vol, veh/h	420	28	15	498	16	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	75	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	457	30	16	541	17	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	457	0	1031	457
Stage 1	-	-	-	-	457	-
Stage 2	-	-	-	-	574	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1104	-	258	604
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	563	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1104	-	254	604
Mov Cap-2 Maneuver	-	-	-	-	254	-
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	555	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	16.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	254	604	-	-	1104	-
HCM Lane V/C Ratio	0.068	0.016	-	-	0.015	-
HCM Control Delay (s)	20.2	11.1	-	-	8.3	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	82	0	3	90
Future Vol, veh/h	0	1	82	0	3	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	89	0	3	98

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	193	89	0	0	89	0
Stage 1	89	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	796	969	-	-	1506	-
Stage 1	934	-	-	-	-	-
Stage 2	920	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	794	969	-	-	1506	-
Mov Cap-2 Maneuver	794	-	-	-	-	-
Stage 1	934	-	-	-	-	-
Stage 2	918	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0.2
HCM LOS	A		

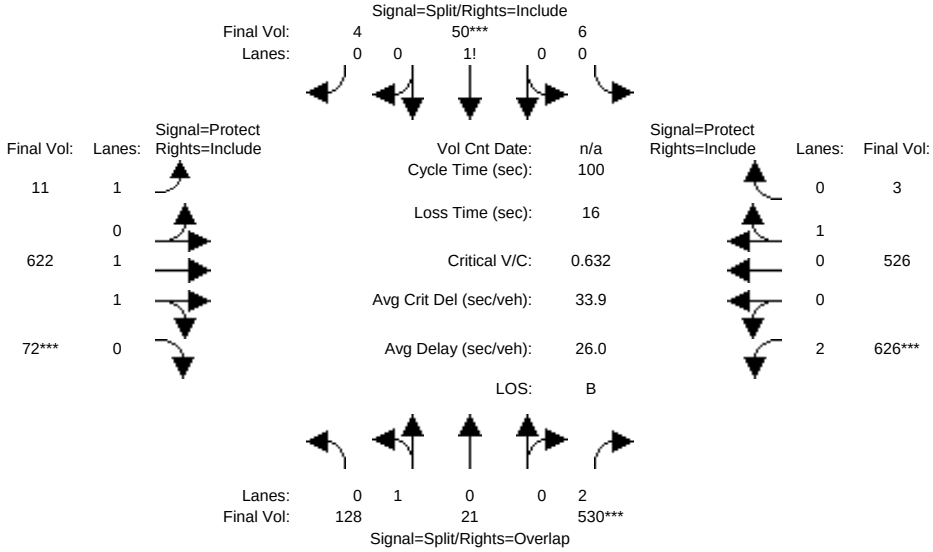
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	969	1506	-
HCM Lane V/C Ratio	-	-	0.001	0.002	-
HCM Control Delay (s)	-	-	8.7	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Appendix D LEVEL OF SERVICE WORKSHEETS: CUMULATIVE CONDITIONS

Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040 No Proj AM

Intersection #1: Daiblo Rd and El Cerro Blvd



Street Name:	Diablo Road						El Cerro Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	100	16	682	4	35	3	9	510	59	557	468	3
Growth 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
Initial Bse:	100	16	682	4	35	3	9	510	59	557	468	3
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	100	16	682	4	35	3	9	510	59	557	468	3
User 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
PHF Adj:	0.78	0.78	0.78	0.70	0.70	0.70	0.82	0.82	0.82	0.89	0.89	0.89
PHF Volume:	128	21	874	6	50	4	11	622	72	626	526	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	21	874	6	50	4	11	622	72	626	526	3
RTOR Reduct:	0	0	344	0	0	0	0	0	0	0	0	0
RTOR Vol:	128	21	530	6	50	4	11	622	72	626	526	3
PCE 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
MLF 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
FinalVolume:	128	21	530	6	50	4	11	622	72	626	526	3
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	0.86	0.14	2.00	0.10	0.83	0.07	1.00	1.79	0.21	2.00	0.99	0.01
Final Sat.:	1422	228	3000	157	1375	118	1650	2958	342	3000	1639	11
Capacity Analysis Module:												
Vol/Sat:	0.09	0.09	0.18	0.04	0.04	0.04	0.01	0.21	0.21	0.21	0.32	0.32
Crit Moves:			****		****				****	****		
Green/Cycle:	0.22	0.22	0.48	0.10	0.10	0.10	0.09	0.26	0.26	0.26	0.43	0.43
Volume/Cap:	0.41	0.41	0.37	0.36	0.36	0.36	0.07	0.80	0.80	0.80	0.75	0.75
Delay/Veh:	26.3	28.8	12.8	38.0	33.1	39.5	31.9	31.0	52.6	31.0	21.8	155.8
Delay 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
AdjDel/Veh:	26.3	28.8	12.8	38.0	33.1	39.5	31.9	31.0	52.6	31.0	21.8	155.8
DesignQueue:	7	7	8	3	3	3	1	15	15	13	18	18

Note: Queue reported is the number of cars per lane.

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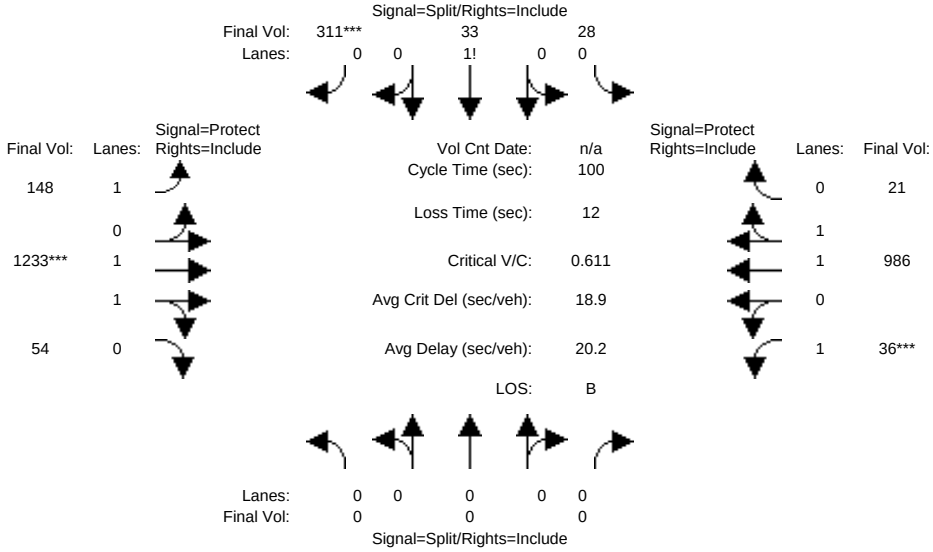
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040 No Proj AM

Intersection #2: Matadera Wy and Diablo Rd



Street Name:	Metadera Way						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	13	15	143	123	1023	45	31	848	18
Growth 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
Initial Bse:	0	0	0	13	15	143	123	1023	45	31	848	18
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	13	15	143	123	1023	45	31	848	18
User 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
PHF Adj:	1.00	1.00	1.00	0.46	0.46	0.46	0.83	0.83	0.83	0.86	0.86	0.86
PHF Volume:	0	0	0	28	33	311	148	1233	54	36	986	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	28	33	311	148	1233	54	36	986	21
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	28	33	311	148	1233	54	36	986	21
PCE 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
MLF 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
FinalVolume:	0	0	0	28	33	311	148	1233	54	36	986	21
Saturation Flow Module:												
Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.07	0.09	0.84	1.00	1.92	0.08	1.00	1.96	0.04
Final Sat.:	0	0	0	131	151	1438	1720	3295	145	1720	3368	72
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.22	0.22	0.22	0.09	0.37	0.37	0.02	0.29	0.29
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.30	0.30	0.30	0.13	0.51	0.51	0.07	0.45	0.45
Volume/Cap:	0.00	0.00	0.00	0.73	0.73	0.73	0.65	0.73	0.73	0.30	0.65	0.65
Delay/Veh:	0.0	0.0	0.0	55.6	52.5	28.6	36.1	15.7	33.7	34.4	17.1	39.6
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	55.6	52.5	28.6	36.1	15.7	33.7	34.4	17.1	39.6
DesignQueue:	0	0	0	15	15	15	7	19	19	2	17	17

Note: Queue reported is the number of cars per lane.

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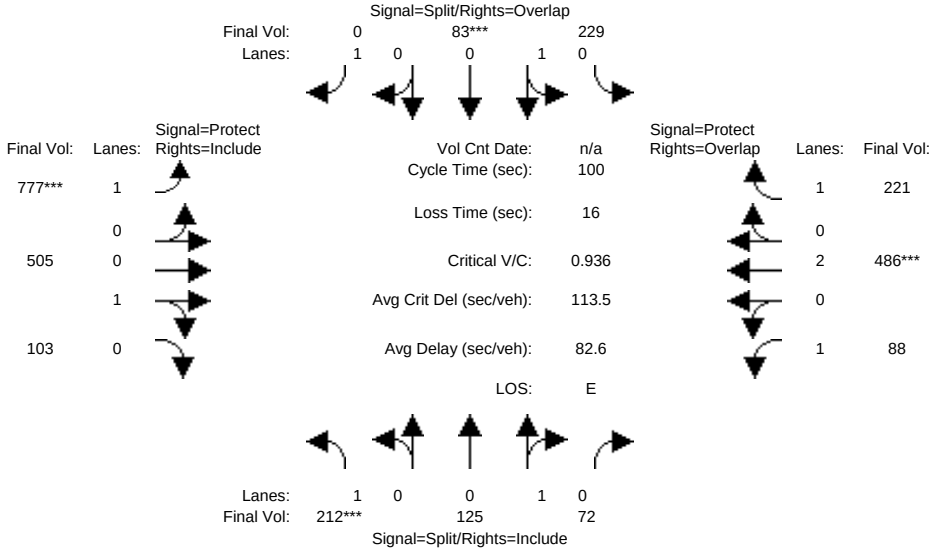
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040 No Proj AM

Intersection #3: Green Valley Rd and Diablo Rd



Street Name:	Green Valeey Road						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	121	71	41	190	69	387	583	379	77	70	389	360
Growth 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
Initial Bse:	121	71	41	190	69	387	583	379	77	70	389	360
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	121	71	41	190	69	387	583	379	77	70	389	360
User 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
PHF Adj:	0.57	0.57	0.57	0.83	0.83	0.83	0.75	0.75	0.75	0.80	0.80	0.80
PHF Volume:	212	125	72	229	83	466	777	505	103	88	486	450
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	212	125	72	229	83	466	777	505	103	88	486	450
RTOR Reduct:	0	0	0	0	0	466	0	0	0	0	0	229
RTOR Vol:	212	125	72	229	83	0	777	505	103	88	486	221
PCE 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
MLF 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
FinalVolume:	212	125	72	229	83	0	777	505	103	88	486	221
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.63	0.37	0.73	0.27	1.00	1.00	0.83	0.17	1.00	2.00	1.00
Final Sat.:	1650	1046	604	1210	440	1650	1650	1371	279	1650	3300	1650
Capacity Analysis Module:												
Vol/Sat:	0.13	0.12	0.12	0.19	0.19	0.00	0.47	0.37	0.37	0.05	0.15	0.13
Crit Moves:	****				****		****				****	
Green/Cycle:	0.12	0.12	0.12	0.17	0.17	0.00	0.42	0.47	0.47	0.09	0.13	0.30
Volume/Cap:	1.11	1.03	1.03	1.11	1.11	0.00	1.11	0.79	0.79	0.60	1.11	0.44
Delay/Veh:	129.5	108	129.9	125.4	165	0.0	91.3	22.0	35.3	38.4	109	22.1
Delay 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
AdjDel/Veh:	129.5	108	129.9	125.4	165	0.0	91.3	22.0	35.3	38.4	109	22.1
DesignQueue:	11	10	10	15	15	0	28	20	20	4	12	9

Note: Queue reported is the number of cars per lane.

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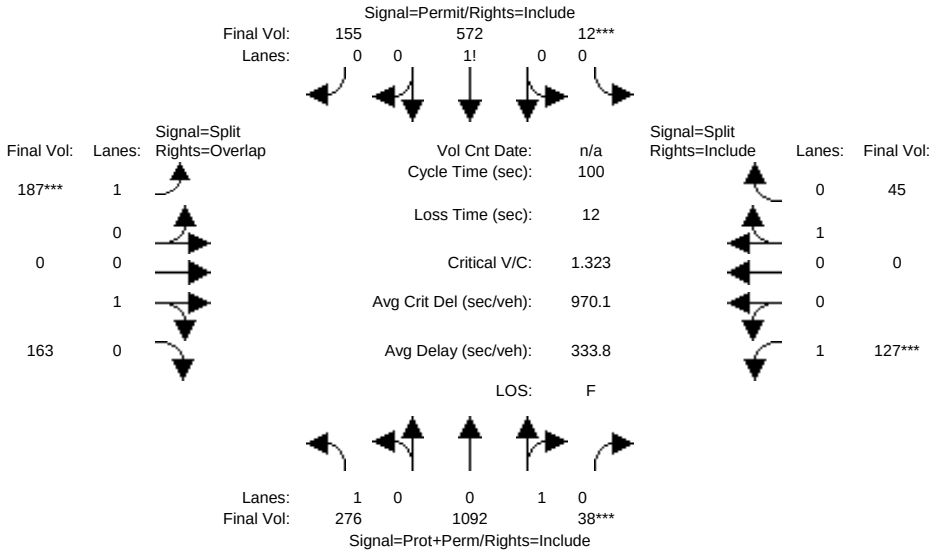
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040 No Proj AM

Intersection #4: Green Valley Rd and Blemer Rd/Cameo Dr



Street Name:	Green Valley Road						Blemer Road/Cameo Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	210	830	29	9	429	116	86	0	75	108	0	38
Growth 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
Initial Bse:	210	830	29	9	429	116	86	0	75	108	0	38
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	210	830	29	9	429	116	86	0	75	108	0	38
User 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
PHF Adj:	0.76	0.76	0.76	0.75	0.75	0.75	0.46	0.46	0.46	0.85	0.85	0.85
PHF Volume:	276	1092	38	12	572	155	187	0	163	127	0	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	276	1092	38	12	572	155	187	0	163	127	0	45
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	276	1092	38	12	572	155	187	0	163	127	0	45
PCE 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
MLF 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
FinalVolume:	276	1092	38	12	572	155	187	0	163	127	0	45
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.97	0.03	0.02	0.77	0.21	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	1650	1594	56	27	1278	345	1650	0	1650	1650	0	1650
Capacity Analysis Module:												
Vol/Sat:	0.17	0.69	0.69	0.45	0.45	0.45	0.11	0.00	0.10	0.08	0.00	0.03
Crit Moves:			****	****			****			****		
Green/Cycle:	0.19	0.41	0.41	0.27	0.49	0.49	0.10	0.00	0.29	0.10	0.00	0.10
Volume/Cap:	0.90	1.67	1.67	1.67	0.90	0.90	1.13	0.00	0.35	0.77	0.00	0.27
Delay/Veh:	50.9	697	971.7	1336	29.6	47.7	144.2	0.0	22.0	46.9	0.0	32.3
Delay 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
AdjDel/Veh:	50.9	697	971.7	1336	29.6	47.7	144.2	0.0	22.0	46.9	0.0	32.3
DesignQueue:	13	44	44	33	23	23	10	0	7	6	0	2

Note: Queue reported is the number of cars per lane.

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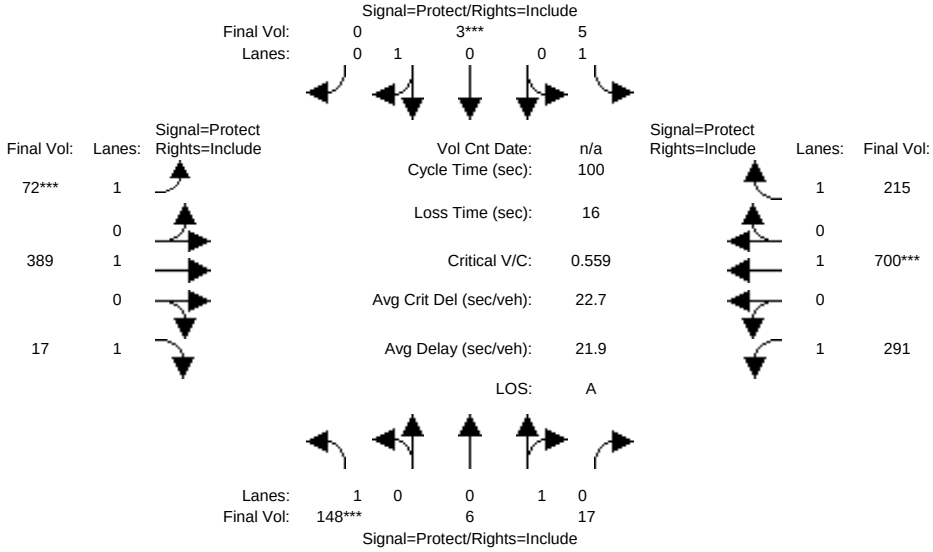
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040 No Proj AM

Intersection #6: Monte Vista H.S. Main and Stone Valeey Rd



Street Name:	Monte Vista H.S. Main Parking Lot						Stone Valley Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	93	4	11	2	1	0	55	296	125	215	518	163
Growth 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
Initial Bse:	93	4	11	2	1	0	55	296	125	215	518	163
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	93	4	11	2	1	0	55	296	125	215	518	163
User 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
PHF Adj:	0.63	0.63	0.63	0.38	0.38	0.38	0.76	0.76	0.76	0.74	0.74	0.74
PHF Volume:	148	6	17	5	3	0	72	389	164	291	700	220
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	148	6	17	5	3	0	72	389	164	291	700	220
RTOR Reduct:	0	0	0	0	0	0	0	0	148	0	0	5
RTOR Vol:	148	6	17	5	3	0	72	389	17	291	700	215
PCE 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
MLF 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
FinalVolume:	148	6	17	5	3	0	72	389	17	291	700	215
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.27	0.73	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1650	440	1210	1650	1650	0	1650	1650	1650	1650	1650	1650
Capacity Analysis Module:												
Vol/Sat:	0.09	0.01	0.01	0.00	0.00	0.00	0.04	0.24	0.01	0.18	0.42	0.13
Crit Moves:	****				****		****				****	
Green/Cycle:	0.12	0.13	0.13	0.09	0.10	0.00	0.07	0.36	0.36	0.27	0.55	0.55
Volume/Cap:	0.77	0.11	0.11	0.04	0.02	0.00	0.63	0.66	0.03	0.66	0.77	0.24
Delay/Veh:	44.2	29.8	29.8	32.0	31.2	0.0	41.8	22.8	16.1	27.7	16.1	8.9
Delay 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
AdjDel/Veh:	44.2	29.8	29.8	32.0	31.2	0.0	41.8	22.8	16.1	27.7	16.1	8.9
DesignQueue:	7	1	1	0	0	0	4	15	1	12	19	5

Note: Queue reported is the number of cars per lane.

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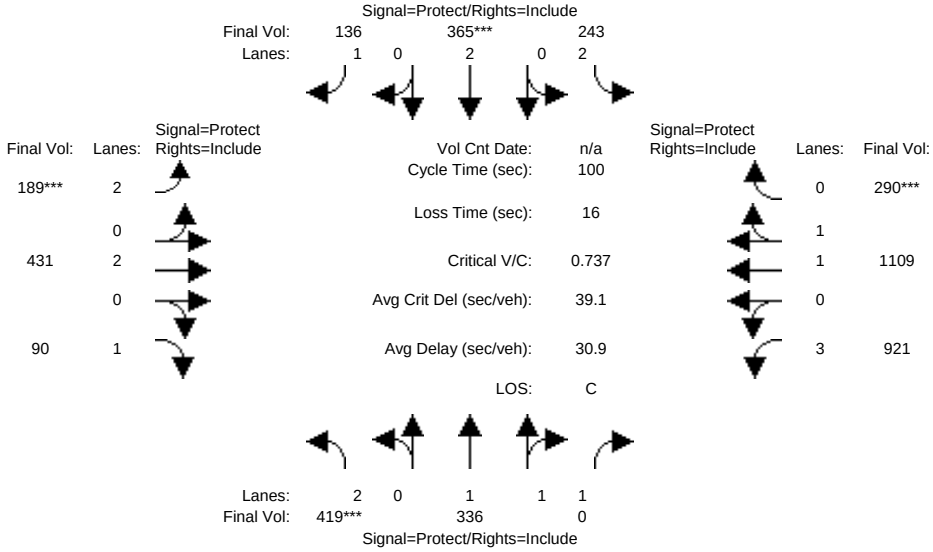
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040 No Proj AM

Intersection #10: Blackhawak Rd/Crow Canyon Rd and Camino Tassajara



Street Name:	Blackhawk Rd/Crow Canyon Rd						Camino Tassajara					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	394	316	282	214	321	211	159	362	269	718	865	226
Growth 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
Initial Bse:	394	316	282	214	321	211	159	362	269	718	865	226
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	394	316	282	214	321	211	159	362	269	718	865	226
User 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
PHF Adj:	0.94	0.94	0.94	0.88	0.88	0.88	0.84	0.84	0.84	0.78	0.78	0.78
PHF Volume:	419	336	300	243	365	240	189	431	320	921	1109	290
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	419	336	300	243	365	240	189	431	320	921	1109	290
RTOR Reduct:	0	0	300	0	0	104	0	0	231	0	0	0
RTOR Vol:	419	336	0	243	365	136	189	431	90	921	1109	290
PCE 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
MLF 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
FinalVolume:	419	336	0	243	365	136	189	431	90	921	1109	290
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	0.91	1.00	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.87	1.00	1.00
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	3.00	1.59	0.41
Final Sat.:	3000	3300	1500	3000	3300	1650	3000	3300	1650	4307	2616	684
Capacity Analysis Module:												
Vol/Sat:	0.14	0.10	0.00	0.08	0.11	0.08	0.06	0.13	0.05	0.21	0.42	0.42
Crit Moves:	****				****		****					****
Green/Cycle:	0.16	0.16	0.00	0.13	0.13	0.13	0.07	0.21	0.21	0.34	0.48	0.48
Volume/Cap:	0.88	0.64	0.00	0.64	0.88	0.65	0.88	0.62	0.26	0.62	0.88	0.88
Delay/Veh:	43.4	32.2	0.0	34.5	46.2	36.9	56.8	28.8	25.5	21.6	23.1	33.5
Delay 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
AdjDel/Veh:	43.4	32.2	0.0	34.5	46.2	36.9	56.8	28.8	25.5	21.6	23.1	33.5
DesignQueue:	10	8	0	6	9	7	5	10	4	12	22	22

Note: Queue reported is the number of cars per lane.

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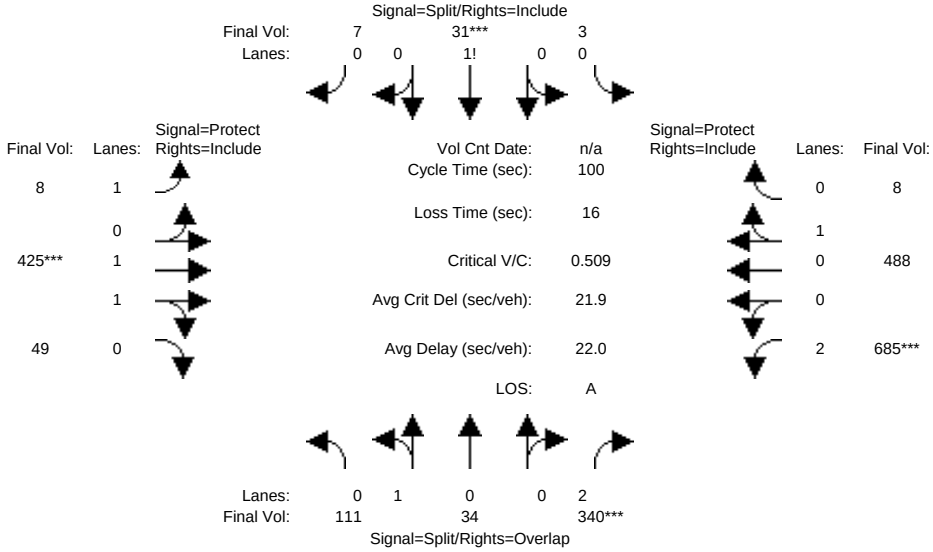
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040 No Proj Sch

Intersection #1: Daiblo Rd and El Cerro Blvd



Street Name:	Diablo Road						El Cerro Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	102	31	659	2	23	5	7	391	45	630	449	7
Growth 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
Initial Bse:	102	31	659	2	23	5	7	391	45	630	449	7
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	102	31	659	2	23	5	7	391	45	630	449	7
User 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
PHF Adj:	0.92	0.92	0.92	0.75	0.75	0.75	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	111	34	716	3	31	7	8	425	49	685	488	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	34	716	3	31	7	8	425	49	685	488	8
RTOR Reduct:	0	0	377	0	0	0	0	0	0	0	0	0
RTOR Vol:	111	34	340	3	31	7	8	425	49	685	488	8
PCE 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
MLF 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
FinalVolume:	111	34	340	3	31	7	8	425	49	685	488	8
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	0.77	0.23	2.00	0.07	0.76	0.17	1.00	1.79	0.21	2.00	0.98	0.02
Final Sat.:	1265	385	3000	110	1265	275	1650	2959	341	3000	1625	25
Capacity Analysis Module:												
Vol/Sat:	0.09	0.09	0.11	0.02	0.02	0.02	0.00	0.14	0.14	0.23	0.30	0.30
Crit Moves:			****		****			****		****		
Green/Cycle:	0.17	0.17	0.52	0.10	0.10	0.10	0.11	0.22	0.22	0.35	0.46	0.46
Volume/Cap:	0.51	0.51	0.22	0.24	0.24	0.24	0.04	0.66	0.66	0.66	0.65	0.65
Delay/Veh:	30.5	33.8	10.0	34.0	32.2	32.9	30.8	29.1	39.7	22.3	17.5	64.9
Delay 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
AdjDel/Veh:	30.5	33.8	10.0	34.0	32.2	32.9	30.8	29.1	39.7	22.3	17.5	64.9
DesignQueue:	7	7	5	2	2	2	0	11	11	13	16	16

Note: Queue reported is the number of cars per lane.

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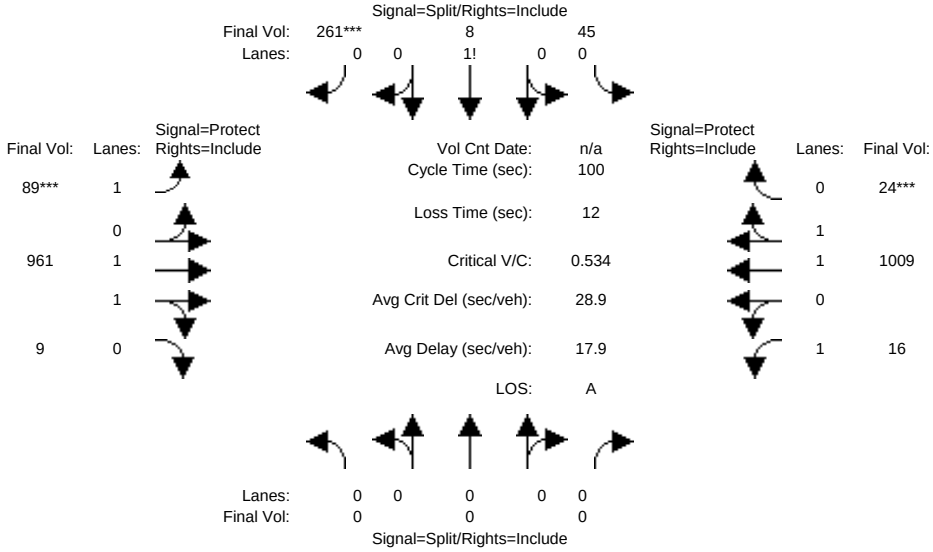
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040 No Proj Sch

Intersection #2: Matadera Wy and Diablo Rd



Street Name:	Metadera Way						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	23	4	133	85	923	9	15	918	22
Growth 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
Initial Bse:	0	0	0	23	4	133	85	923	9	15	918	22
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	23	4	133	85	923	9	15	918	22
User 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
PHF Adj:	1.00	1.00	1.00	0.51	0.51	0.51	0.96	0.96	0.96	0.91	0.91	0.91
PHF Volume:	0	0	0	45	8	261	89	961	9	16	1009	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	45	8	261	89	961	9	16	1009	24
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	45	8	261	89	961	9	16	1009	24
PCE 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
MLF 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
FinalVolume:	0	0	0	45	8	261	89	961	9	16	1009	24
Saturation Flow Module:												
Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.14	0.03	0.83	1.00	1.98	0.02	1.00	1.95	0.05
Final Sat.:	0	0	0	247	43	1430	1720	3407	33	1720	3359	81
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.18	0.18	0.18	0.05	0.28	0.28	0.01	0.30	0.30
Crit Moves:						****	****					****
Green/Cycle:	0.00	0.00	0.00	0.30	0.30	0.30	0.08	0.46	0.46	0.12	0.49	0.49
Volume/Cap:	0.00	0.00	0.00	0.61	0.61	0.61	0.61	0.61	0.61	0.08	0.61	0.61
Delay/Veh:	0.0	0.0	0.0	32.0	58.7	24.8	38.9	15.9	47.0	30.4	14.5	29.2
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	32.0	58.7	24.8	38.9	15.9	47.0	30.4	14.5	29.2
DesignQueue:	0	0	0	13	13	13	5	15	15	1	16	16

Note: Queue reported is the number of cars per lane.

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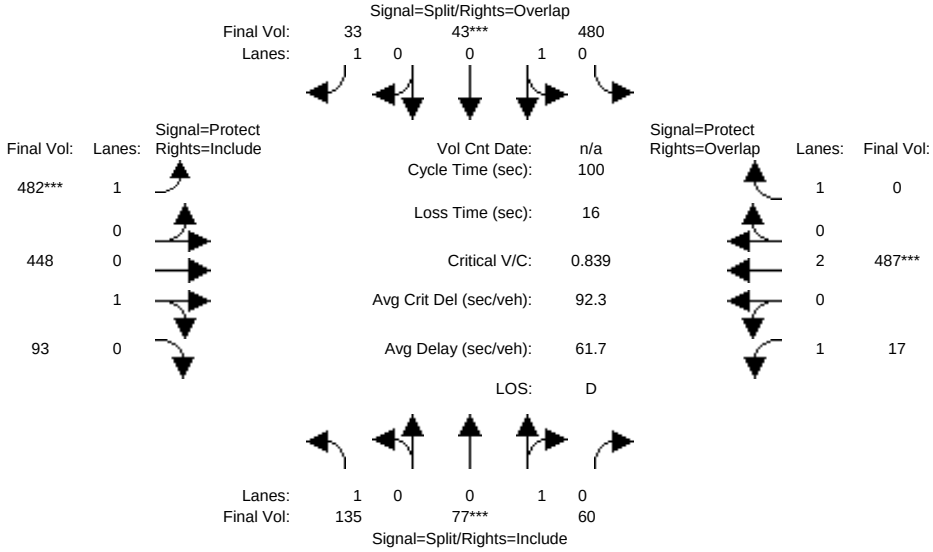
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040 No Proj Sch

Intersection #3: Green Valley Rd and Diablo Rd



Street Name:	Green Valeey Road						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	70	40	31	394	35	422	472	439	91	16	453	268
Growth 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
Initial Bse:	70	40	31	394	35	422	472	439	91	16	453	268
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	70	40	31	394	35	422	472	439	91	16	453	268
User 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
PHF Adj:	0.52	0.52	0.52	0.82	0.82	0.82	0.98	0.98	0.98	0.93	0.93	0.93
PHF Volume:	135	77	60	480	43	515	482	448	93	17	487	288
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	135	77	60	480	43	515	482	448	93	17	487	288
RTOR Reduct:	0	0	0	0	0	482	0	0	0	0	0	288
RTOR Vol:	135	77	60	480	43	33	482	448	93	17	487	0
PCE 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
MLF 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
FinalVolume:	135	77	60	480	43	33	482	448	93	17	487	0
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.56	0.44	0.92	0.08	1.00	1.00	0.83	0.17	1.00	2.00	1.00
Final Sat.:	1650	930	720	1515	135	1650	1650	1367	283	1650	3300	1650
Capacity Analysis Module:												
Vol/Sat:	0.08	0.08	0.08	0.32	0.32	0.02	0.29	0.33	0.33	0.01	0.15	0.00
Crit Moves:		****			****		****				****	
Green/Cycle:	0.10	0.10	0.10	0.31	0.31	0.60	0.29	0.35	0.35	0.08	0.14	0.00
Volume/Cap:	0.82	0.83	0.83	1.02	1.02	0.03	1.02	0.93	0.93	0.14	1.02	0.00
Delay/Veh:	51.5	62.8	68.4	64.9	144	6.4	65.8	41.0	70.8	33.3	70.9	0.0
Delay 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
AdjDel/Veh:	51.5	62.8	68.4	64.9	144	6.4	65.8	41.0	70.8	33.3	70.9	0.0
DesignQueue:	7	7	7	22	22	1	20	21	21	1	12	0

Note: Queue reported is the number of cars per lane.

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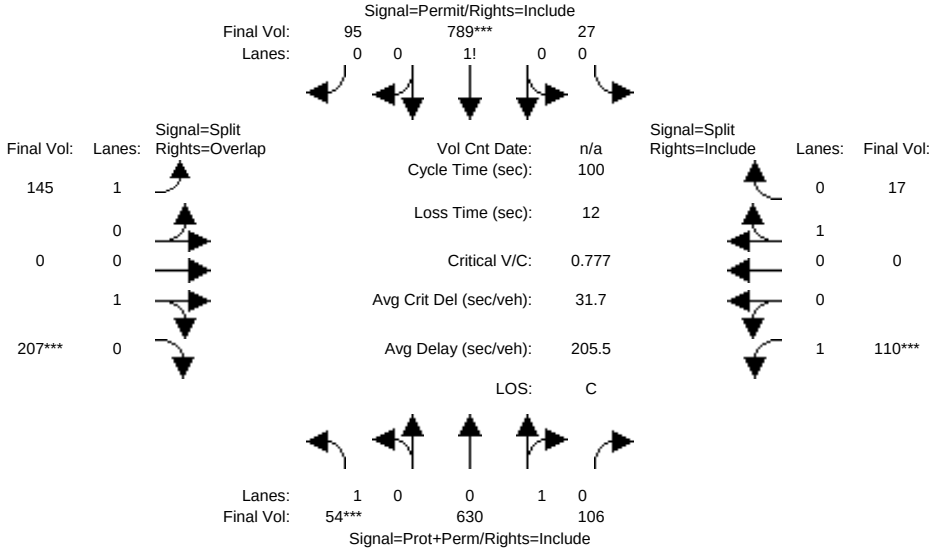
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040 No Proj Sch

Intersection #4: Green Valley Rd and Blemer Rd/Cameo Dr



Street Name:	Green Valley Road						Blemer Road/Cameo Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	50	586	99	21	623	75	80	0	114	97	0	15
Growth 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
Initial Bse:	50	586	99	21	623	75	80	0	114	97	0	15
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	50	586	99	21	623	75	80	0	114	97	0	15
User 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
PHF Adj:	0.93	0.93	0.93	0.79	0.79	0.79	0.55	0.55	0.55	0.88	0.88	0.88
PHF Volume:	54	630	106	27	789	95	145	0	207	110	0	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	630	106	27	789	95	145	0	207	110	0	17
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	54	630	106	27	789	95	145	0	207	110	0	17
PCE 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
MLF 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
FinalVolume:	54	630	106	27	789	95	145	0	207	110	0	17
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.86	0.14	0.03	0.87	0.10	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	1650	1412	238	48	1430	172	1650	0	1650	1650	0	1650
Capacity Analysis Module:												
Vol/Sat:	0.03	0.45	0.45	0.55	0.55	0.55	0.09	0.00	0.13	0.07	0.00	0.01
Crit Moves:	****				****				****	****		
Green/Cycle:	0.07	0.29	0.29	0.36	0.58	0.58	0.13	0.00	0.20	0.10	0.00	0.10
Volume/Cap:	0.47	1.54	1.54	1.54	0.95	0.95	0.67	0.00	0.62	0.67	0.00	0.10
Delay/Veh:	36.6	500	586.8	794.8	30.6	70.1	37.1	0.0	30.6	40.1	0.0	31.5
Delay 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
AdjDel/Veh:	36.6	500	586.8	794.8	30.6	70.1	37.1	0.0	30.6	40.1	0.0	31.5
DesignQueue:	3	32	32	37	24	24	7	0	9	6	0	1

Note: Queue reported is the number of cars per lane.

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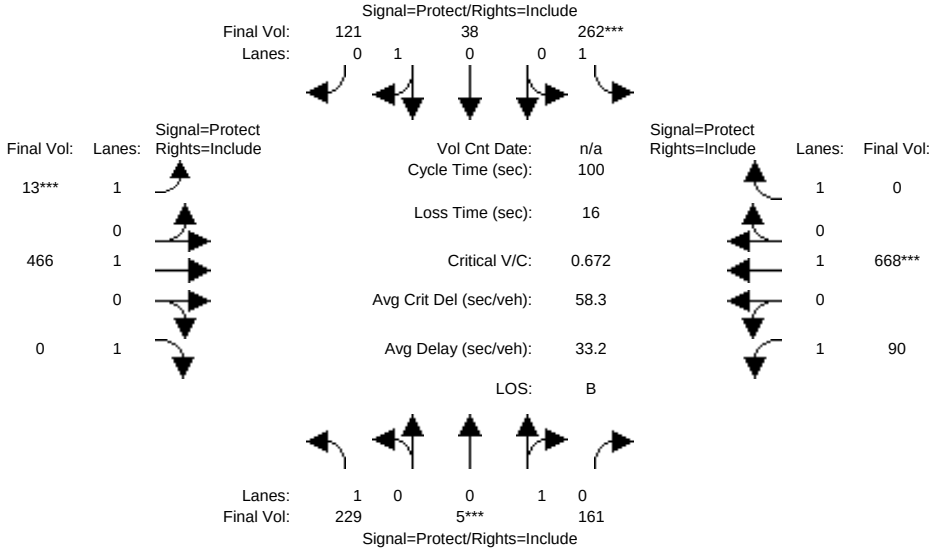
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040 No Proj Sch

Intersection #6: Monte Vista H.S. Main and Stone Valeey Rd



Street Name:	Monte Vista H.S. Main Parking Lot						Stone Valley Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	135	3	95	102	15	47	11	387	50	76	561	7
Growth 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
Initial Bse:	135	3	95	102	15	47	11	387	50	76	561	7
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	135	3	95	102	15	47	11	387	50	76	561	7
User 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
PHF Adj:	0.59	0.59	0.59	0.39	0.39	0.39	0.83	0.83	0.83	0.84	0.84	0.84
PHF Volume:	229	5	161	262	38	121	13	466	60	90	668	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	229	5	161	262	38	121	13	466	60	90	668	8
RTOR Reduct:	0	0	0	0	0	0	0	0	60	0	0	8
RTOR Vol:	229	5	161	262	38	121	13	466	0	90	668	0
PCE 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
MLF 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
FinalVolume:	229	5	161	262	38	121	13	466	0	90	668	0
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.03	0.97	1.00	0.24	0.76	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1650	51	1599	1650	399	1251	1650	1650	1650	1650	1650	1650
Capacity Analysis Module:												
Vol/Sat:	0.14	0.10	0.10	0.16	0.10	0.10	0.01	0.28	0.00	0.05	0.40	0.00
Crit Moves:		****		****			****				****	
Green/Cycle:	0.17	0.12	0.12	0.18	0.13	0.13	0.07	0.43	0.00	0.11	0.47	0.00
Volume/Cap:	0.79	0.86	0.86	0.86	0.77	0.77	0.11	0.65	0.00	0.51	0.86	0.00
Delay/Veh:	40.1	213	54.9	45.4	64.1	45.7	33.6	18.8	0.0	34.5	25.2	0.0
Delay 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
AdjDel/Veh:	40.1	213	54.9	45.4	64.1	45.7	33.6	18.8	0.0	34.5	25.2	0.0
DesignQueue:	11	8	8	12	8	8	1	16	0	5	22	0

Note: Queue reported is the number of cars per lane.

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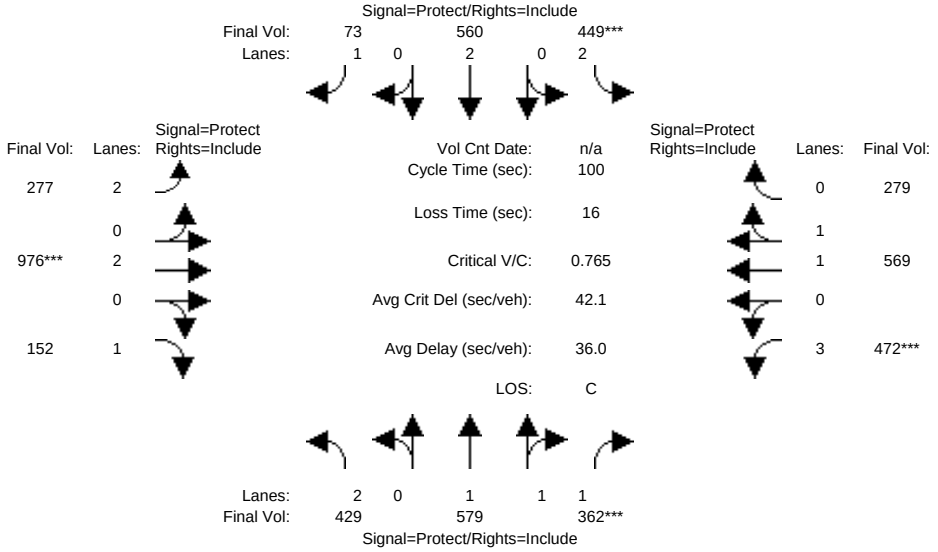
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040 No Proj Sch

Intersection #10: Blackhawak Rd/Crow Canyon Rd and Camino Tassajara



Street Name:	Blackhawk Rd/Crow Canyon Rd						Camino Tassajara					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	395	533	500	391	487	196	244	859	342	411	495	243
Growth 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
Initial Bse:	395	533	500	391	487	196	244	859	342	411	495	243
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	395	533	500	391	487	196	244	859	342	411	495	243
User 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
PHF Adj:	0.92	0.92	0.92	0.87	0.87	0.87	0.88	0.88	0.88	0.87	0.87	0.87
PHF Volume:	429	579	543	449	560	225	277	976	389	472	569	279
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	429	579	543	449	560	225	277	976	389	472	569	279
RTOR Reduct:	0	0	181	0	0	153	0	0	236	0	0	0
RTOR Vol:	429	579	362	449	560	73	277	976	152	472	569	279
PCE 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
MLF 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
FinalVolume:	429	579	362	449	560	73	277	976	152	472	569	279
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	0.91	1.00	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.87	1.00	1.00
Lanes:	2.00	1.85	1.15	2.00	2.00	1.00	2.00	2.00	1.00	3.00	1.34	0.66
Final Sat.:	3000	3045	1731	3000	3300	1650	3000	3300	1650	4307	2213	1087
Capacity Analysis Module:												
Vol/Sat:	0.14	0.19	0.21	0.15	0.17	0.04	0.09	0.30	0.09	0.11	0.26	0.26
Crit Moves:			****	****				****		****		
Green/Cycle:	0.18	0.23	0.23	0.16	0.21	0.21	0.12	0.32	0.32	0.12	0.33	0.33
Volume/Cap:	0.79	0.83	0.91	0.91	0.79	0.21	0.78	0.91	0.28	0.91	0.78	0.78
Delay/Veh:	35.7	33.9	46.3	46.5	33.0	24.9	40.6	33.1	19.4	47.8	27.4	30.9
Delay 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
AdjDel/Veh:	35.7	33.9	46.3	46.5	33.0	24.9	40.6	33.1	19.4	47.8	27.4	30.9
DesignQueue:	10	14	14	11	13	3	7	20	6	8	17	17

Note: Queue reported is the number of cars per lane.

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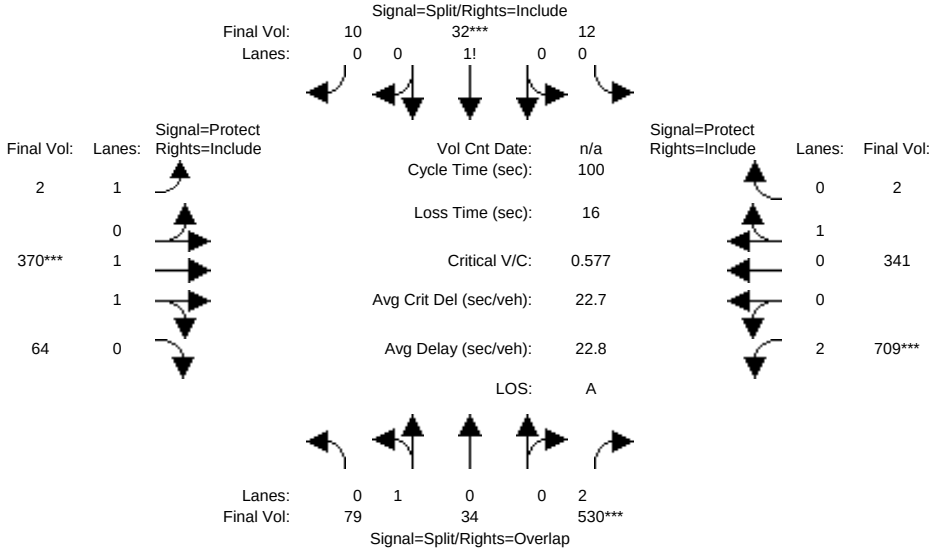
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040 No Proj PM

Intersection #1: Daiblo Rd and El Cerro Blvd



Street Name:	Diablo Road						El Cerro Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	70	30	819	7	19	6	2	333	58	624	300	2
Growth 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
Initial Bse:	70	30	819	7	19	6	2	333	58	624	300	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	70	30	819	7	19	6	2	333	58	624	300	2
User 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
PHF Adj:	0.89	0.89	0.89	0.60	0.60	0.60	0.90	0.90	0.90	0.88	0.88	0.88
PHF Volume:	79	34	920	12	32	10	2	370	64	709	341	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	79	34	920	12	32	10	2	370	64	709	341	2
RTOR Reduct:	0	0	390	0	0	0	0	0	0	0	0	0
RTOR Vol:	79	34	530	12	32	10	2	370	64	709	341	2
PCE 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
MLF 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
FinalVolume:	79	34	530	12	32	10	2	370	64	709	341	2
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	0.70	0.30	2.00	0.22	0.59	0.19	1.00	1.70	0.30	2.00	0.99	0.01
Final Sat.:	1155	495	3000	361	980	309	1650	2810	490	3000	1639	11
Capacity Analysis Module:												
Vol/Sat:	0.07	0.07	0.18	0.03	0.03	0.03	0.00	0.13	0.13	0.24	0.21	0.21
Crit Moves:			****		****			****		****		
Green/Cycle:	0.24	0.24	0.56	0.10	0.10	0.10	0.13	0.18	0.18	0.32	0.37	0.37
Volume/Cap:	0.28	0.28	0.31	0.32	0.32	0.32	0.01	0.74	0.74	0.74	0.56	0.56
Delay/Veh:	24.0	24.2	9.0	34.0	32.9	34.3	29.5	33.8	47.6	25.3	19.9	77.8
Delay 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
AdjDel/Veh:	24.0	24.2	9.0	34.0	32.9	34.3	29.5	33.8	47.6	25.3	19.9	77.8
DesignQueue:	5	5	7	3	3	3	0	10	10	14	13	13

Note: Queue reported is the number of cars per lane.

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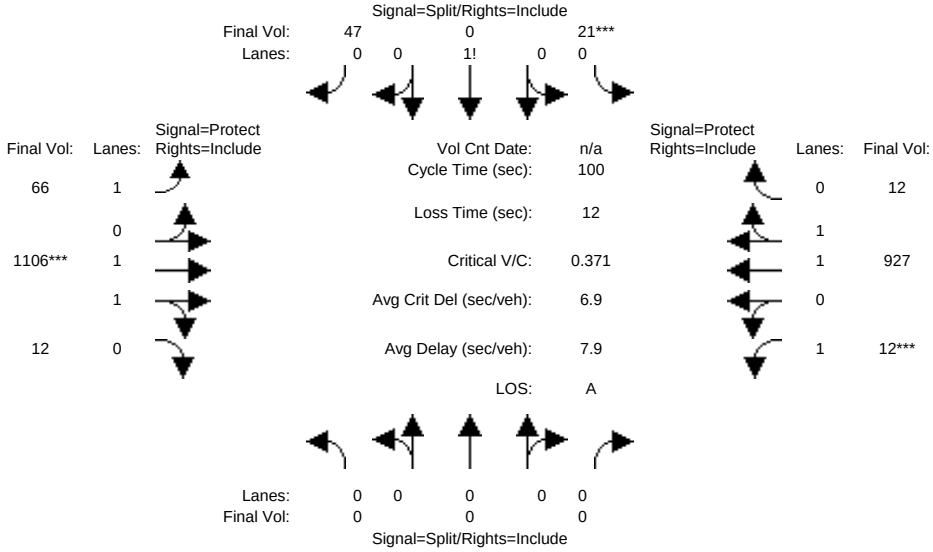
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040 No Proj PM

Intersection #2: Matadera Wy and Diablo Rd



Street Name:	Metadera Way						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	17	0	38	59	995	11	11	844	11
Growth 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
Initial Bse:	0	0	0	17	0	38	59	995	11	11	844	11
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	17	0	38	59	995	11	11	844	11
User 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
PHF Adj:	1.00	1.00	1.00	0.81	0.81	0.81	0.90	0.90	0.90	0.91	0.91	0.91
PHF Volume:	0	0	0	21	0	47	66	1106	12	12	927	12
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	21	0	47	66	1106	12	12	927	12
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	21	0	47	66	1106	12	12	927	12
PCE 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
MLF 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
FinalVolume:	0	0	0	21	0	47	66	1106	12	12	927	12
Saturation Flow Module:												
Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.31	0.00	0.69	1.00	1.98	0.02	1.00	1.97	0.03
Final Sat.:	0	0	0	532	0	1188	1720	3402	38	1720	3396	44
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.04	0.04	0.32	0.32	0.01	0.27	0.27
Crit Moves:				****				****		****		
Green/Cycle:	0.00	0.00	0.00	0.10	0.00	0.10	0.16	0.71	0.71	0.07	0.62	0.62
Volume/Cap:	0.00	0.00	0.00	0.39	0.00	0.39	0.24	0.46	0.46	0.10	0.44	0.44
Delay/Veh:	0.0	0.0	0.0	34.9	0.0	33.6	28.4	4.9	12.5	33.5	7.7	14.1
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	34.9	0.0	33.6	28.4	4.9	12.5	33.5	7.7	14.1
DesignQueue:	0	0	0	3	0	3	3	10	10	1	11	11

Note: Queue reported is the number of cars per lane.

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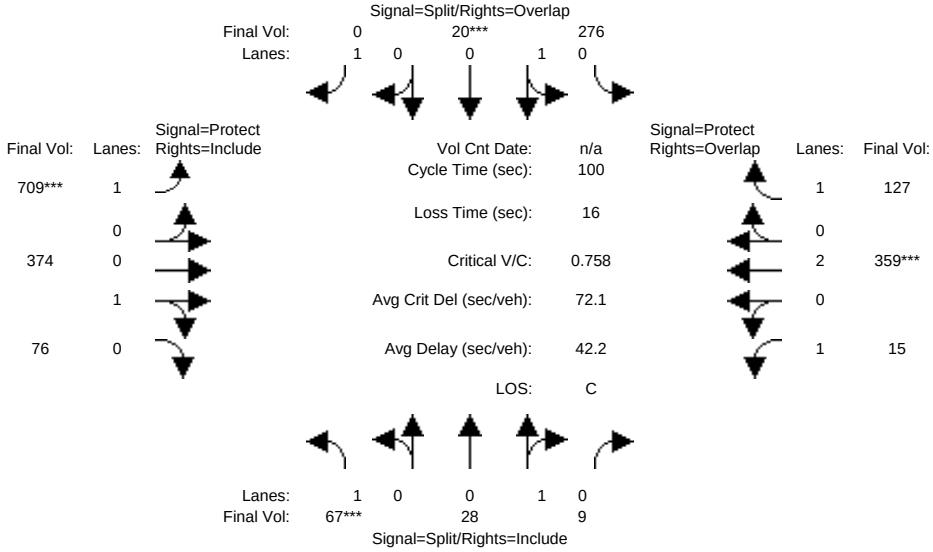
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040 No Proj PM

Intersection #3: Green Valley Rd and Diablo Rd



Street Name:	Green Valeey Road						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	57	24	8	226	16	450	638	337	68	14	330	370
Growth 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
Initial Bse:	57	24	8	226	16	450	638	337	68	14	330	370
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	57	24	8	226	16	450	638	337	68	14	330	370
User 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
PHF Adj:	0.85	0.85	0.85	0.82	0.82	0.82	0.90	0.90	0.90	0.92	0.92	0.92
PHF Volume:	67	28	9	276	20	549	709	374	76	15	359	402
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	67	28	9	276	20	549	709	374	76	15	359	402
RTOR Reduct:	0	0	0	0	0	549	0	0	0	0	0	276
RTOR Vol:	67	28	9	276	20	0	709	374	76	15	359	127
PCE 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
MLF 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
FinalVolume:	67	28	9	276	20	0	709	374	76	15	359	127
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.75	0.25	0.93	0.07	1.00	1.00	0.83	0.17	1.00	2.00	1.00
Final Sat.:	1650	1238	412	1541	109	1650	1650	1373	277	1650	3300	1650
Capacity Analysis Module:												
Vol/Sat:	0.04	0.02	0.02	0.18	0.18	0.00	0.43	0.27	0.27	0.01	0.11	0.08
Crit Moves:	****				****		****				****	
Green/Cycle:	0.10	0.10	0.10	0.18	0.18	0.00	0.44	0.44	0.44	0.11	0.11	0.30
Volume/Cap:	0.41	0.23	0.23	0.97	0.97	0.00	0.97	0.62	0.62	0.08	0.97	0.26
Delay/Veh:	33.4	32.1	32.4	64.5	169	0.0	40.1	17.8	22.7	30.5	62.7	20.7
Delay 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
AdjDel/Veh:	33.4	32.1	32.4	64.5	169	0.0	40.1	17.8	22.7	30.5	62.7	20.7
DesignQueue:	3	2	2	14	14	0	24	15	15	1	9	5

Note: Queue reported is the number of cars per lane.

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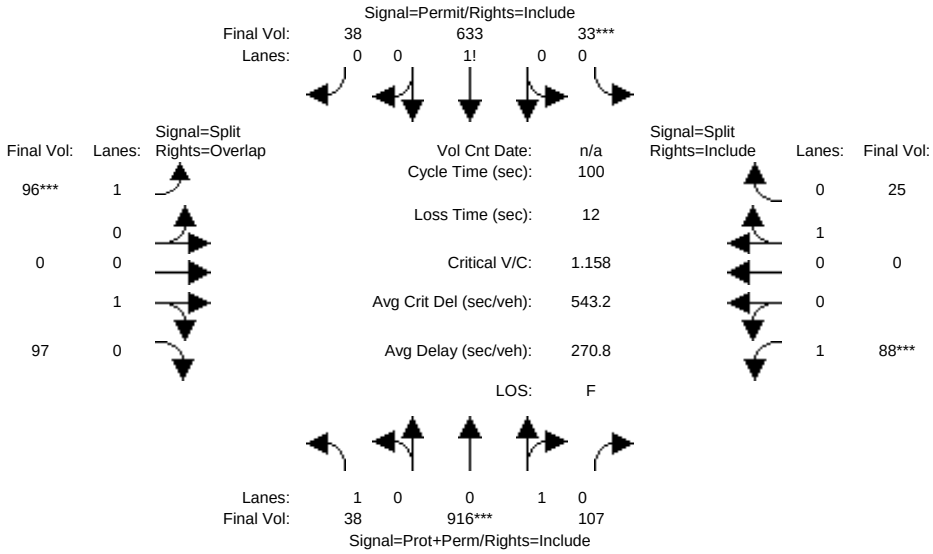
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040 No Proj PM

Intersection #4: Green Valley Rd and Blemer Rd/Cameo Dr



Street Name:	Green Valley Road						Blemer Road/Cameo Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	35	834	97	29	557	33	69	0	70	67	0	19
Growth 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
Initial Bse:	35	834	97	29	557	33	69	0	70	67	0	19
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	35	834	97	29	557	33	69	0	70	67	0	19
User 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
PHF Adj:	0.91	0.91	0.91	0.88	0.88	0.88	0.72	0.72	0.72	0.76	0.76	0.76
PHF Volume:	38	916	107	33	633	38	96	0	97	88	0	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	38	916	107	33	633	38	96	0	97	88	0	25
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	38	916	107	33	633	38	96	0	97	88	0	25
PCE 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
MLF 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
FinalVolume:	38	916	107	33	633	38	96	0	97	88	0	25
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.90	0.10	0.05	0.90	0.05	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	1650	1478	172	77	1485	88	1650	0	1650	1650	0	1650
Capacity Analysis Module:												
Vol/Sat:	0.02	0.62	0.62	0.43	0.43	0.43	0.06	0.00	0.06	0.05	0.00	0.02
Crit Moves:		****		****			****			****		
Green/Cycle:	0.10	0.40	0.40	0.28	0.58	0.58	0.10	0.00	0.20	0.10	0.00	0.10
Volume/Cap:	0.24	1.54	1.54	1.54	0.73	0.73	0.58	0.00	0.30	0.53	0.00	0.15
Delay/Veh:	32.4	493	586.8	748.3	13.8	37.2	36.8	0.0	26.6	35.5	0.0	31.7
Delay 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
AdjDel/Veh:	32.4	493	586.8	748.3	13.8	37.2	36.8	0.0	26.6	35.5	0.0	31.7
DesignQueue:	2	40	40	31	18	18	5	0	4	4	0	1

Note: Queue reported is the number of cars per lane.

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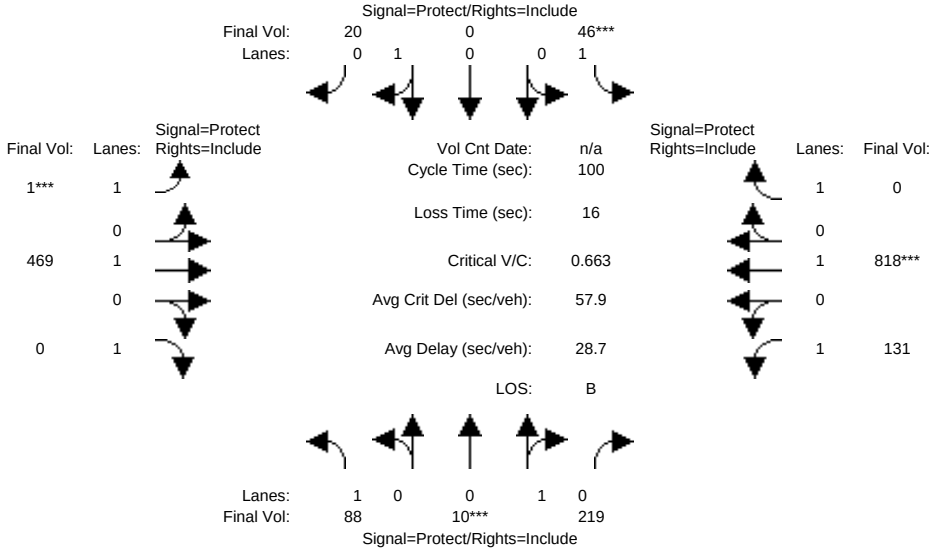
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040 No Proj PM

Intersection #6: Monte Vista H.S. Main and Stone Valeey Rd



Street Name:	Monte Vista H.S. Main Parking Lot						Stone Valley Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	52	6	129	19	0	8	1	446	56	123	769	1
Growth 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
Initial Bse:	52	6	129	19	0	8	1	446	56	123	769	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	52	6	129	19	0	8	1	446	56	123	769	1
User 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
PHF Adj:	0.59	0.59	0.59	0.41	0.41	0.41	0.95	0.95	0.95	0.94	0.94	0.94
PHF Volume:	88	10	219	46	0	20	1	469	59	131	818	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	88	10	219	46	0	20	1	469	59	131	818	1
RTOR Reduct:	0	0	0	0	0	0	0	0	59	0	0	1
RTOR Vol:	88	10	219	46	0	20	1	469	0	131	818	0
PCE 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
MLF 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
FinalVolume:	88	10	219	46	0	20	1	469	0	131	818	0
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.04	0.96	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1650	73	1577	1650	0	1650	1650	1650	1650	1650	1650	1650
Capacity Analysis Module:												
Vol/Sat:	0.05	0.14	0.14	0.03	0.00	0.01	0.00	0.28	0.00	0.08	0.50	0.00
Crit Moves:		****		****			****				****	
Green/Cycle:	0.09	0.15	0.15	0.07	0.00	0.07	0.07	0.48	0.00	0.13	0.55	0.00
Volume/Cap:	0.58	0.91	0.91	0.40	0.00	0.17	0.01	0.59	0.00	0.59	0.91	0.00
Delay/Veh:	37.5	181	56.1	35.5	0.0	33.8	33.3	15.3	0.0	34.3	24.8	0.0
Delay 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
AdjDel/Veh:	37.5	181	56.1	35.5	0.0	33.8	33.3	15.3	0.0	34.3	24.8	0.0
DesignQueue:	5	11	11	2	0	1	0	14	0	6	23	0

Note: Queue reported is the number of cars per lane.

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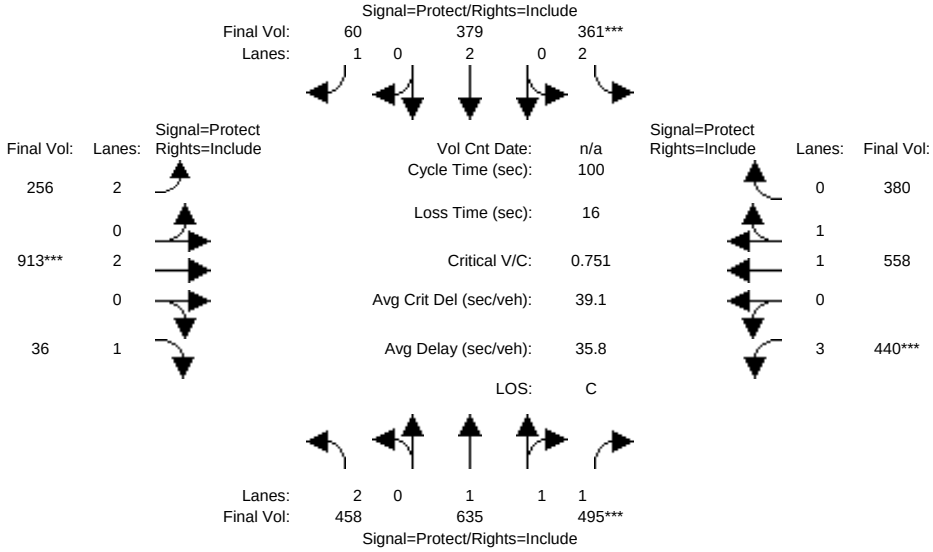
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040 No Proj PM

Intersection #10: Blackhawak Rd/Crow Canyon Rd and Camino Tassajara



Street Name:	Blackhawk Rd/Crow Canyon Rd						Camino Tassajara					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	417	578	604	354	371	197	228	813	256	387	491	334
Growth 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
Initial Bse:	417	578	604	354	371	197	228	813	256	387	491	334
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	417	578	604	354	371	197	228	813	256	387	491	334
User 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
PHF Adj:	0.91	0.91	0.91	0.98	0.98	0.98	0.89	0.89	0.89	0.88	0.88	0.88
PHF Volume:	458	635	664	361	379	201	256	913	288	440	558	380
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	458	635	664	361	379	201	256	913	288	440	558	380
RTOR Reduct:	0	0	169	0	0	141	0	0	252	0	0	0
RTOR Vol:	458	635	495	361	379	60	256	913	36	440	558	380
PCE 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
MLF 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
FinalVolume:	458	635	495	361	379	60	256	913	36	440	558	380
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	0.91	1.00	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.87	1.00	1.00
Lanes:	2.00	1.69	1.31	2.00	2.00	1.00	2.00	2.00	1.00	3.00	1.19	0.81
Final Sat.:	3000	2782	1971	3000	3300	1650	3000	3300	1650	4307	1964	1336
Capacity Analysis Module:												
Vol/Sat:	0.15	0.23	0.25	0.12	0.11	0.04	0.09	0.28	0.02	0.10	0.28	0.28
Crit Moves:			****	****				****		****		
Green/Cycle:	0.24	0.28	0.28	0.13	0.18	0.18	0.10	0.31	0.31	0.11	0.33	0.33
Volume/Cap:	0.64	0.81	0.89	0.89	0.64	0.20	0.87	0.89	0.07	0.89	0.87	0.87
Delay/Veh:	27.8	30.4	38.5	47.9	31.1	27.0	50.6	32.6	18.7	46.7	33.2	36.5
Delay 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
AdjDel/Veh:	27.8	30.4	38.5	47.9	31.1	27.0	50.6	32.6	18.7	46.7	33.2	36.5
DesignQueue:	10	16	16	9	9	3	7	19	1	7	19	19

Note: Queue reported is the number of cars per lane.

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	510	59	557	468	3	100	16	682	4	35	3
Future Volume (veh/h)	9	510	59	557	468	3	100	16	682	4	35	3
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.98	1.00		0.97	1.00		0.95
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	11	622	72	626	526	3	128	21	874	6	50	4
Adj No. of Lanes	1	2	0	2	1	0	0	1	2	0	1	0
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.78	0.78	0.78	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	15	826	95	502	733	4	475	78	1246	10	80	6
Arrive On Green	0.01	0.26	0.26	0.15	0.40	0.40	0.31	0.31	0.31	0.05	0.05	0.05
Sat Flow, veh/h	1774	3197	369	3442	1850	11	1534	252	2714	182	1520	122
Grp Volume(v), veh/h	11	344	350	626	0	529	149	0	874	60	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1797	1721	0	1861	1786	0	1357	1824	0	0
Q Serve(g_s), s	0.4	12.3	12.3	10.0	0.0	16.4	4.3	0.0	17.7	2.2	0.0	0.0
Cycle Q Clear(g_c), s	0.4	12.3	12.3	10.0	0.0	16.4	4.3	0.0	17.7	2.2	0.0	0.0
Prop In Lane	1.00		0.21	1.00		0.01	0.86		1.00	0.10		0.07
Lane Grp Cap(c), veh/h	15	457	464	502	0	737	553	0	1246	96	0	0
V/C Ratio(X)	0.75	0.75	0.75	1.25	0.00	0.72	0.27	0.00	0.70	0.62	0.00	0.00
Avail Cap(c_a), veh/h	142	542	551	502	0	737	626	0	1358	639	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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	33.9	23.4	23.4	29.3	0.0	17.5	17.8	0.0	15.0	31.8	0.0	0.0
Incr Delay (d2), s/veh	24.2	5.6	5.6	126.6	0.0	3.7	0.1	0.0	1.2	6.4	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	0.3	6.6	6.8	13.5	0.0	9.1	2.1	0.0	6.8	1.3	0.0	0.0
LnGrp Delay(d),s/veh	58.1	29.0	29.0	155.9	0.0	21.1	17.9	0.0	16.1	38.2	0.0	0.0
LnGrp LOS	E	C	C	F		C	B		B	D		
Approach Vol, veh/h		705			1155			1023			60	
Approach Delay, s/veh		29.5			94.2			16.4			38.2	
Approach LOS		C			F			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.0	21.7		7.6	4.6	31.1		25.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	10.0	21.0		24.0	5.5	25.5		24.0
Max Q Clear Time (g_c+I1), s	12.0	14.3		4.2	2.4	18.4		19.7
Green Ext Time (p_c), s	0.0	3.4		0.2	0.0	4.9		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	50.5
HCM 2010 LOS	D

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	1023	45	31	848	19	0	0	0	13	15	143
Future Volume (veh/h)	123	1023	45	31	848	19	0	0	0	13	15	143
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98				1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	148	1233	54	36	986	22				28	33	311
Adj No. of Lanes	1	2	0	1	2	0				0	1	0
Peak Hour Factor	0.83	0.83	0.83	0.86	0.86	0.86				0.46	0.46	0.46
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	187	1620	71	43	1373	31				35	41	385
Arrive On Green	0.11	0.47	0.47	0.02	0.39	0.39				0.29	0.29	0.29
Sat Flow, veh/h	1774	3450	151	1774	3537	79				118	139	1311
Grp Volume(v), veh/h	148	632	655	36	493	515				372	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1832	1774	1770	1846				1568	0	0
Q Serve(g_s), s	4.6	16.6	16.7	1.1	13.3	13.3				12.4	0.0	0.0
Cycle Q Clear(g_c), s	4.6	16.6	16.7	1.1	13.3	13.3				12.4	0.0	0.0
Prop In Lane	1.00		0.08	1.00		0.04				0.08		0.84
Lane Grp Cap(c), veh/h	187	831	860	43	687	717				460	0	0
V/C Ratio(X)	0.79	0.76	0.76	0.84	0.72	0.72				0.81	0.00	0.00
Avail Cap(c_a), veh/h	220	831	860	176	753	786				612	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	24.6	12.3	12.3	27.4	14.6	14.6				18.4	0.0	0.0
Incr Delay (d2), s/veh	12.7	4.4	4.3	15.1	3.4	3.3				4.4	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
%ile BackOfQ(50%),veh/ln	2.9	9.1	9.4	0.7	7.1	7.4				5.8	0.0	0.0
LnGrp Delay(d),s/veh	37.3	16.7	16.7	42.5	18.0	17.9				22.8	0.0	0.0
LnGrp LOS	D	B	B	D	B	B				C		
Approach Vol, veh/h		1435			1044						372	
Approach Delay, s/veh		18.8			18.8						22.8	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	5.4	30.5		20.5	9.9	25.9		
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s	5.6	25.4		22.0	7.0	24.0		
Max Q Clear Time (g_c+I1), s	3.1	18.7		14.4	6.6	15.3		
Green Ext Time (p_c), s	0.0	6.3		1.1	0.0	6.5		

Intersection Summary	
HCM 2010 Ctrl Delay	19.3
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
3: McCauley Rd/Green Valley Rd & Diablo Rd

Timing Plan: AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	583	379	77	70	389	360	121	71	41	190	69	387
Future Volume (veh/h)	583	379	77	70	389	360	121	71	41	190	69	387
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.92	1.00		1.00	1.00		0.92
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	777	505	103	88	486	450	212	125	72	229	83	466
Adj No. of Lanes	1	1	0	1	2	1	1	1	0	0	1	1
Peak Hour Factor	0.75	0.75	0.75	0.80	0.80	0.80	0.57	0.57	0.57	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	767	773	158	110	510	473	240	150	86	220	80	929
Arrive On Green	0.43	0.51	0.51	0.06	0.14	0.14	0.14	0.14	0.14	0.17	0.17	0.17
Sat Flow, veh/h	1774	1502	306	1774	3539	1451	1774	1109	639	1319	478	1464
Grp Volume(v), veh/h	777	0	608	88	486	450	212	0	197	312	0	466
Grp Sat Flow(s),veh/h/ln	1774	0	1808	1774	1770	1451	1774	0	1747	1797	0	1464
Q Serve(g_s), s	57.0	0.0	32.4	6.5	18.0	19.0	15.5	0.0	14.5	22.0	0.0	22.0
Cycle Q Clear(g_c), s	57.0	0.0	32.4	6.5	18.0	19.0	15.5	0.0	14.5	22.0	0.0	22.0
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.37	0.73		1.00
Lane Grp Cap(c), veh/h	767	0	930	110	510	473	240	0	237	300	0	929
V/C Ratio(X)	1.01	0.00	0.65	0.80	0.95	0.95	0.88	0.00	0.83	1.04	0.00	0.50
Avail Cap(c_a), veh/h	767	0	930	175	510	473	283	0	278	300	0	929
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.4	0.0	23.4	61.1	56.0	37.8	56.0	0.0	55.5	54.9	0.0	15.5
Incr Delay (d2), s/veh	35.8	0.0	1.8	5.4	28.4	29.3	21.6	0.0	14.6	63.0	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	35.3	0.0	16.7	3.3	10.8	20.1	9.0	0.0	8.0	16.1	0.0	10.0
LnGrp Delay(d),s/veh	73.2	0.0	25.2	66.5	84.4	67.2	77.5	0.0	70.2	117.9	0.0	16.1
LnGrp LOS	F		C	E	F	E	E		E	F		B
Approach Vol, veh/h		1385			1024			409			778	
Approach Delay, s/veh		52.1			75.3			74.0			57.0	
Approach LOS		D			E			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.2	71.8		26.0	61.0	23.0		21.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	13.0	63.0		22.0	57.0	19.0		21.0
Max Q Clear Time (g_c+I1), s	8.5	34.4		24.0	59.0	21.0		17.5
Green Ext Time (p_c), s	0.0	13.3		0.0	0.0	0.0		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	62.3
HCM 2010 LOS	E

Notes

User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	86	75	210	859	537	116
Future Volume (vph)	86	75	210	859	537	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	0.88	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1557	1583	1770	1863	1807	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1557	1583	1770	1863	1807	
Peak-hour factor, PHF	0.46	0.46	0.76	0.76	0.75	0.75
Adj. Flow (vph)	187	163	276	1130	716	155
RTOR Reduction (vph)	0	126	0	0	5	0
Lane Group Flow (vph)	187	37	276	1130	866	0
Confl. Peds. (#/hr)	28					3
Confl. Bikes (#/hr)						3
Turn Type	Perm	pm+ov	Prot	NA	NA	
Protected Phases		5	5	2	6	
Permitted Phases	4	4				
Actuated Green, G (s)	17.0	33.0	16.0	102.6	82.6	
Effective Green, g (s)	17.0	33.0	16.0	102.6	82.6	
Actuated g/C Ratio	0.12	0.23	0.11	0.70	0.57	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	1.8	1.8	1.8	3.0	3.0	
Lane Grp Cap (vph)	181	401	193	1309	1022	
v/s Ratio Prot		0.01	c0.16	c0.61	0.48	
v/s Ratio Perm	c0.12	0.01				
v/c Ratio	1.03	0.09	1.43	0.86	0.85	
Uniform Delay, d1	64.5	44.7	65.0	16.4	26.4	
Progression Factor	1.00	1.00	1.00	1.00	0.51	
Incremental Delay, d2	75.9	0.0	220.7	6.1	1.6	
Delay (s)	140.4	44.7	285.7	22.5	15.2	
Level of Service	F	D	F	C	B	
Approach Delay (s)	95.8			74.2	15.2	
Approach LOS	F			E	B	

Intersection Summary			
HCM 2000 Control Delay	57.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	146.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	108	38	916	29	9	545
Future Volume (vph)	108	38	916	29	9	545
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	1.00			1.00
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1762	1583	1853			1861
Flt Permitted	0.95	1.00	1.00			0.64
Satd. Flow (perm)	1762	1583	1853			1195
Peak-hour factor, PHF	0.85	0.85	0.76	0.76	0.75	0.75
Adj. Flow (vph)	127	45	1205	38	12	727
RTOR Reduction (vph)	0	28	1	0	0	0
Lane Group Flow (vph)	127	17	1242	0	0	739
Confl. Peds. (#/hr)	1			2	2	
Confl. Bikes (#/hr)				1		
Turn Type	Perm	Perm	NA		Perm	NA
Protected Phases			2			6
Permitted Phases	3	3			6	
Actuated Green, G (s)	14.4	14.4	102.6			82.6
Effective Green, g (s)	14.4	14.4	102.6			82.6
Actuated g/C Ratio	0.10	0.10	0.70			0.57
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	2.1	2.1	3.0			3.0
Lane Grp Cap (vph)	173	156	1302			676
v/s Ratio Prot			c0.67			
v/s Ratio Perm	c0.07	0.01				c0.62
v/c Ratio	0.73	0.11	0.95			1.09
Uniform Delay, d1	63.9	60.0	19.6			31.7
Progression Factor	1.00	1.00	0.51			1.00
Incremental Delay, d2	13.2	0.1	8.2			62.8
Delay (s)	77.1	60.1	18.2			94.5
Level of Service	E	E	B			F
Approach Delay (s)	72.7		18.2			94.5
Approach LOS	E		B			F

Intersection Summary			
HCM 2000 Control Delay	48.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	146.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	224.5
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	25	53	422	0	82	107	1	0	914	13	31
Future Vol, veh/h	0	25	53	422	0	82	107	1	0	914	13	31
Peak Hour Factor	0.92	0.60	0.60	0.60	0.92	0.98	0.98	0.98	0.92	0.69	0.69	0.69
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	42	88	703	0	84	109	1	0	1325	19	45
Number of Lanes	0	1	1	1	0	1	2	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	3
HCM Control Delay	218.1	16.4	267.7
HCM LOS	F	C	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	97%	0%	100%	0%	0%	100%	0%	0%	11%	0%
Vol Thru, %	0%	3%	0%	0%	100%	0%	0%	100%	97%	89%	0%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	3%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	466	461	31	25	53	422	82	71	37	28	28
LT Vol	466	448	0	25	0	0	82	0	0	3	0
Through Vol	0	13	0	0	53	0	0	71	36	25	0
RT Vol	0	0	31	0	0	422	0	0	1	0	28
Lane Flow Rate	676	668	45	42	88	703	84	73	37	34	34
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	1.546	1.525	0.088	0.102	0.205	1.495	0.232	0.192	0.098	0.096	0.089
Departure Headway (Hd)	9.035	9.021	7.826	9.343	8.837	8.128	11.356	10.844	10.824	11.361	10.608
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	405	407	461	386	409	450	318	333	333	317	340
Service Time	6.735	6.721	5.526	7.043	6.537	5.828	9.056	8.544	8.524	9.061	8.308
HCM Lane V/C Ratio	1.669	1.641	0.098	0.109	0.215	1.562	0.264	0.219	0.111	0.107	0.1
HCM Control Delay	280.8	271.8	11.3	13.1	13.8	255.9	17.5	16.1	14.7	15.3	14.3
HCM Lane LOS	F	F	B	B	B	F	C	C	B	C	B
HCM 95th-tile Q	34	33.1	0.3	0.3	0.8	34.6	0.9	0.7	0.3	0.3	0.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↑	↱
Traffic Vol, veh/h	0	3	25	28
Future Vol, veh/h	0	3	25	28
Peak Hour Factor	0.92	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	4	30	34
Number of Lanes	0	0	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	14.8
HCM LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	296	125	215	518	163	93	4	11	2	1	0
Future Volume (veh/h)	55	296	125	215	518	163	93	4	11	2	1	0
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.68	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	72	389	164	291	700	220	148	6	17	5	3	0
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.76	0.76	0.76	0.74	0.74	0.74	0.63	0.63	0.63	0.38	0.38	0.38
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	87	582	479	330	837	706	185	93	264	7	363	0
Arrive On Green	0.05	0.31	0.31	0.19	0.45	0.45	0.10	0.30	0.30	0.00	0.20	0.00
Sat Flow, veh/h	1774	1863	1535	1774	1863	1571	1774	315	893	1774	1863	0
Grp Volume(v), veh/h	72	389	164	291	700	220	148	0	23	5	3	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1535	1774	1863	1571	1774	0	1208	1774	1863	0
Q Serve(g_s), s	3.3	14.8	6.7	13.0	27.1	7.3	6.7	0.0	1.1	0.2	0.1	0.0
Cycle Q Clear(g_c), s	3.3	14.8	6.7	13.0	27.1	7.3	6.7	0.0	1.1	0.2	0.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.74	1.00		0.00
Lane Grp Cap(c), veh/h	87	582	479	330	837	706	185	0	357	7	363	0
V/C Ratio(X)	0.83	0.67	0.34	0.88	0.84	0.31	0.80	0.00	0.06	0.72	0.01	0.00
Avail Cap(c_a), veh/h	87	582	480	391	901	760	326	0	400	65	363	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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	38.5	24.4	21.6	32.4	19.8	14.4	35.7	0.0	20.6	40.6	26.5	0.0
Incr Delay (d2), s/veh	43.6	3.3	0.6	16.5	6.9	0.4	7.6	0.0	0.1	39.7	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	2.7	8.1	2.9	7.9	15.4	3.2	3.6	0.0	0.4	0.2	0.1	0.0
LnGrp Delay(d),s/veh	82.1	27.7	22.2	48.9	26.8	14.8	43.3	0.0	20.7	80.3	26.5	0.0
LnGrp LOS	F	C	C	D	C	B	D		C	F	C	
Approach Vol, veh/h		625			1211			171			8	
Approach Delay, s/veh		32.5			29.9			40.3			60.1	
Approach LOS		C			C			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.2	30.0	4.3	28.1	8.0	41.2	12.5	19.9
Change Period (Y+Rc), s	4.0	4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	18.0	25.5	3.0	27.0	4.0	39.5	15.0	15.0
Max Q Clear Time (g_c+I1), s	15.0	16.8	2.2	3.1	5.3	29.1	8.7	2.1
Green Ext Time (p_c), s	0.2	6.5	0.0	0.1	0.0	7.6	0.2	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	31.7
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	109.8
Intersection LOS	F

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Lane Configurations									
Traffic Vol, veh/h	0	280	336	0	495	243	0	122	120
Future Vol, veh/h	0	280	336	0	495	243	0	122	120
Peak Hour Factor	0.92	0.86	0.86	0.92	0.93	0.93	0.92	0.52	0.52
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	326	391	0	532	261	0	235	231
Number of Lanes	0	1	1	0	1	0	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	28.4	236.9	18.5
HCM LOS	D	F	C

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	67%	0%	0%
Vol Right, %	0%	0%	33%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	280	336	738	122	120
LT Vol	280	0	0	122	0
Through Vol	0	336	495	0	0
RT Vol	0	0	243	0	120
Lane Flow Rate	326	391	794	235	231
Geometry Grp	7	7	4	7	7
Degree of Util (X)	0.677	0.758	1.462	0.529	0.444
Departure Headway (Hd)	8.086	7.568	6.633	8.785	7.539
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	449	481	555	413	480
Service Time	5.786	5.268	4.661	6.485	5.239
HCM Lane V/C Ratio	0.726	0.813	1.431	0.569	0.481
HCM Control Delay	26.1	30.3	236.9	20.9	16.1
HCM Lane LOS	D	D	F	C	C
HCM 95th-tile Q	4.9	6.5	38.8	3	2.2

Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	26	580	22	106	40	0	0	29	57
Future Vol, veh/h	0	0	0	26	580	22	106	40	0	0	29	57
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	84	84	84	91	91	91	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	31	690	26	116	44	0	0	37	72

Major/Minor	Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	820	780	-	-	766	705
Stage 1	-	-	-	0	0	-	-	766	-
Stage 2	-	-	-	820	780	-	-	0	-
Critical Hdwy	4.12	-	-	7.12	6.52	-	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-	-	-	-
Follow-up Hdwy	2.218	-	-	3.518	4.018	-	-	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	294	327	0	0	333	436
Stage 1	-	-	-	-	-	0	0	412	-
Stage 2	-	-	-	369	406	0	0	-	-
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	225	327	-	-	333	436
Mov Cap-2 Maneuver	-	-	-	225	327	-	-	333	-
Stage 1	-	-	-	-	-	-	-	412	-
Stage 2	-	-	-	280	406	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		31.7	17.5
HCM LOS		D	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	225	327	-	-	-	395
HCM Lane V/C Ratio	0.518	0.134	-	-	-	0.276
HCM Control Delay (s)	37	17.7	-	-	-	17.5
HCM Lane LOS	E	C	-	-	-	C
HCM 95th %tile Q(veh)	2.7	0.5	-	-	-	1.1

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	336	31	0	0	0	0	119	41	28	27	0
Future Vol, veh/h	27	336	31	0	0	0	0	119	41	28	27	0
Conflicting Peds, #/hr	1	0	0	0	0	0	0	0	4	4	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	85	-	100	0	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	92	92	92	91	91	91	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	373	34	0	0	0	0	131	45	35	34	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	1	0	0	-	452	395	521	469	-
Stage 1	-	-	-	-	451	-	1	1	-
Stage 2	-	-	-	-	1	-	520	468	-
Critical Hdwy	4.12	-	-	-	6.52	6.22	7.12	6.52	-
Critical Hdwy Stg 1	-	-	-	-	5.52	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	-	4.018	3.318	3.518	4.018	-
Pot Cap-1 Maneuver	1622	-	-	0	503	654	466	492	0
Stage 1	-	-	-	0	571	-	-	-	0
Stage 2	-	-	-	0	-	-	539	561	0
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	1622	-	-	-	490	654	338	480	-
Mov Cap-2 Maneuver	-	-	-	-	490	-	338	480	-
Stage 1	-	-	-	-	557	-	-	-	-
Stage 2	-	-	-	-	-	-	375	548	-

Approach	EB	NB	SB
HCM Control Delay, s	0.5	12.8	15
HCM LOS		B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	SBLn1	SBLn2
Capacity (veh/h)	490	490	654	1622	-	-	338	480
HCM Lane V/C Ratio	0.133	0.133	0.069	0.018	-	-	0.105	0.071
HCM Control Delay (s)	13.5	13.5	10.9	7.3	0	-	16.9	13.1
HCM Lane LOS	B	B	B	A	A	-	C	B
HCM 95th %tile Q(veh)	0.5	0.5	0.2	0.1	-	-	0.3	0.2

Intersection	
Intersection Delay, s/veh	87.7
Intersection LOS	F

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations									
Traffic Vol, veh/h	0	315	216	0	404	142	0	96	351
Future Vol, veh/h	0	315	216	0	404	142	0	96	351
Peak Hour Factor	0.92	0.84	0.84	0.92	0.72	0.72	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	375	257	0	561	197	0	105	386
Number of Lanes	0	1	1	0	1	2	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	44.4	147.9	50.4
HCM LOS	E	F	F

Lane	NBLn1	NBLn2	NBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	404	71	71	315	216	96	351
LT Vol	0	0	0	315	0	96	0
Through Vol	404	0	0	0	0	0	351
RT Vol	0	71	71	0	216	0	0
Lane Flow Rate	561	99	99	375	257	105	386
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	1.347	0.217	0.168	0.925	0.549	0.268	0.925
Departure Headway (Hd)	8.639	7.915	6.12	9.569	8.329	9.872	9.349
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	426	457	590	383	437	366	390
Service Time	6.339	5.615	3.82	7.269	6.029	7.572	7.049
HCM Lane V/C Ratio	1.317	0.217	0.168	0.979	0.588	0.287	0.99
HCM Control Delay	195.9	12.8	10.1	60.7	20.7	16.1	59.8
HCM Lane LOS	F	B	B	F	C	C	F
HCM 95th-tile Q	26.1	0.8	0.6	9.8	3.2	1.1	9.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	362	269	718	865	226	394	316	282	214	321	211
Future Volume (vph)	159	362	269	718	865	226	394	316	282	214	321	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Lane Util. Factor	0.97	0.95	1.00	0.94	0.95		0.97	0.91	0.91	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.96	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1551	4990	3417		3433	3256	1417	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1551	4990	3417		3433	3256	1417	3433	3539	1583
Peak-hour factor, PHF	0.78	0.78	0.78	0.84	0.84	0.84	0.94	0.94	0.94	0.88	0.88	0.88
Adj. Flow (vph)	204	464	345	855	1030	269	419	336	300	243	365	240
RTOR Reduction (vph)	0	0	221	0	17	0	0	23	151	0	0	140
Lane Group Flow (vph)	204	464	124	855	1282	0	419	418	44	243	365	100
Confl. Peds. (#/hr)			7			3			5			
Confl. Bikes (#/hr)			2			3						
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	9.3	25.5	25.5	35.3	51.5		16.8	26.7	26.7	11.6	21.1	21.1
Effective Green, g (s)	9.3	25.5	25.5	35.3	51.5		16.8	26.7	26.7	11.6	21.1	21.1
Actuated g/C Ratio	0.08	0.21	0.21	0.30	0.43		0.14	0.22	0.22	0.10	0.18	0.18
Clearance Time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	267	755	330	1474	1472		482	727	316	333	624	279
v/s Ratio Prot	c0.06	0.13		0.17	c0.38		c0.12	c0.13		0.07	0.10	
v/s Ratio Perm			0.08						0.03			0.06
v/c Ratio	0.76	0.61	0.38	0.58	0.87		0.87	0.58	0.14	0.73	0.58	0.36
Uniform Delay, d1	54.0	42.6	40.2	35.8	31.0		50.3	41.4	37.2	52.4	45.2	43.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.1	1.7	1.0	0.4	6.1		14.8	1.3	0.3	6.6	1.7	1.1
Delay (s)	65.1	44.3	41.2	36.2	37.1		65.1	42.7	37.5	59.1	46.8	44.3
Level of Service	E	D	D	D	D		E	D	D	E	D	D
Approach Delay (s)		47.4			36.7			50.6			49.6	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	43.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	119.5	Sum of lost time (s)	20.8
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM 2010 Signalized Intersection Summary
1: Diablo Rd & El Cerro Blvd & Ackerman Dr

Timing Plan: School PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	391	45	630	449	7	102	31	659	2	23	5
Future Volume (veh/h)	7	391	45	630	449	7	102	31	659	2	23	5
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.96
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	8	425	49	685	488	8	111	34	716	3	31	7
Adj No. of Lanes	1	2	0	2	1	0	0	1	2	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	11	753	86	802	845	14	342	105	1323	5	56	13
Arrive On Green	0.01	0.24	0.24	0.23	0.46	0.46	0.25	0.25	0.25	0.04	0.04	0.04
Sat Flow, veh/h	1774	3195	366	3442	1827	30	1373	421	2705	131	1350	305
Grp Volume(v), veh/h	8	234	240	685	0	496	145	0	716	41	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1791	1721	0	1857	1794	0	1352	1786	0	0
Q Serve(g_s), s	0.3	7.7	7.8	12.6	0.0	13.0	4.4	0.0	12.4	1.5	0.0	0.0
Cycle Q Clear(g_c), s	0.3	7.7	7.8	12.6	0.0	13.0	4.4	0.0	12.4	1.5	0.0	0.0
Prop In Lane	1.00		0.20	1.00		0.02	0.77		1.00	0.07		0.17
Lane Grp Cap(c), veh/h	11	417	422	802	0	859	446	0	1323	74	0	0
V/C Ratio(X)	0.73	0.56	0.57	0.85	0.00	0.58	0.32	0.00	0.54	0.56	0.00	0.00
Avail Cap(c_a), veh/h	147	560	567	1037	0	993	649	0	1628	646	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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	32.9	22.3	22.4	24.4	0.0	13.1	20.4	0.0	12.1	31.2	0.0	0.0
Incr Delay (d2), s/veh	28.4	1.7	1.7	4.6	0.0	0.9	0.2	0.0	0.1	6.4	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	0.2	4.0	4.1	6.5	0.0	6.8	2.2	0.0	4.6	0.9	0.0	0.0
LnGrp Delay(d),s/veh	61.3	24.0	24.1	29.0	0.0	14.0	20.5	0.0	12.2	37.6	0.0	0.0
LnGrp LOS	E	C	C	C		B	C		B	D		
Approach Vol, veh/h		482			1181			861			41	
Approach Delay, s/veh		24.7			22.7			13.6			37.6	
Approach LOS		C			C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.5	19.6		6.7	4.4	34.7		20.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	20.0	21.0		24.0	5.5	35.5		24.0
Max Q Clear Time (g_c+I1), s	14.6	9.8		3.5	2.3	15.0		14.4
Green Ext Time (p_c), s	0.8	5.8		0.1	0.0	8.4		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	20.2
HCM 2010 LOS	C

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	923	9	15	918	22	0	0	0	23	4	133
Future Volume (veh/h)	85	923	9	15	918	22	0	0	0	23	4	133
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97				1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	89	961	9	16	1009	24				45	8	261
Adj No. of Lanes	1	2	0	1	2	0				0	1	0
Peak Hour Factor	0.96	0.96	0.96	0.91	0.91	0.91				0.51	0.51	0.51
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	112	1625	15	21	1416	34				63	11	367
Arrive On Green	0.06	0.45	0.45	0.01	0.40	0.40				0.28	0.28	0.28
Sat Flow, veh/h	1774	3591	34	1774	3531	84				225	40	1308
Grp Volume(v), veh/h	89	474	496	16	506	527				314	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1856	1774	1770	1845				1573	0	0
Q Serve(g_s), s	2.3	9.4	9.4	0.4	11.3	11.3				8.4	0.0	0.0
Cycle Q Clear(g_c), s	2.3	9.4	9.4	0.4	11.3	11.3				8.4	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.05				0.14		0.83
Lane Grp Cap(c), veh/h	112	800	839	21	710	740				441	0	0
V/C Ratio(X)	0.79	0.59	0.59	0.75	0.71	0.71				0.71	0.00	0.00
Avail Cap(c_a), veh/h	211	800	839	207	767	800				736	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	21.7	9.6	9.6	23.2	11.8	11.8				15.2	0.0	0.0
Incr Delay (d2), s/veh	4.6	1.4	1.3	17.5	3.2	3.1				0.8	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
%ile BackOfQ(50%),veh/ln	1.3	4.8	5.0	0.3	6.1	6.4				3.8	0.0	0.0
LnGrp Delay(d),s/veh	26.4	11.0	11.0	40.7	15.1	14.9				16.0	0.0	0.0
LnGrp LOS	C	B	B	D	B	B				B		
Approach Vol, veh/h		1059			1049						314	
Approach Delay, s/veh		12.3			15.4						16.0	
Approach LOS		B			B						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	4.6	25.3		17.2	7.0	22.9		
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s	5.5	20.5		22.0	5.6	20.4		
Max Q Clear Time (g_c+I1), s	2.4	11.4		10.4	4.3	13.3		
Green Ext Time (p_c), s	0.0	7.9		1.1	0.0	5.6		

Intersection Summary	
HCM 2010 Ctrl Delay	14.1
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
3: McCauley Rd/Green Valley Rd & Diablo Rd

Timing Plan: School PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	472	439	91	16	453	268	70	40	31	394	35	422
Future Volume (veh/h)	472	439	91	16	453	268	70	40	31	394	35	422
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.92	1.00		1.00	1.00		0.97
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	482	448	93	17	487	288	135	77	60	480	43	515
Adj No. of Lanes	1	1	0	1	2	1	1	1	0	0	1	1
Peak Hour Factor	0.98	0.98	0.98	0.93	0.93	0.93	0.52	0.52	0.52	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	509	654	136	20	579	727	178	97	76	504	45	927
Arrive On Green	0.29	0.44	0.44	0.01	0.16	0.16	0.10	0.10	0.10	0.31	0.31	0.31
Sat Flow, veh/h	1774	1489	309	1774	3539	1462	1774	970	755	1635	146	1534
Grp Volume(v), veh/h	482	0	541	17	487	288	135	0	137	523	0	515
Grp Sat Flow(s),veh/h/ln	1774	0	1798	1774	1770	1462	1774	0	1725	1781	0	1534
Q Serve(g_s), s	30.1	0.0	27.3	1.1	15.1	14.7	8.4	0.0	8.8	32.5	0.0	23.2
Cycle Q Clear(g_c), s	30.1	0.0	27.3	1.1	15.1	14.7	8.4	0.0	8.8	32.5	0.0	23.2
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.44	0.92		1.00
Lane Grp Cap(c), veh/h	509	0	790	20	579	727	178	0	173	549	0	927
V/C Ratio(X)	0.95	0.00	0.69	0.85	0.84	0.40	0.76	0.00	0.79	0.95	0.00	0.56
Avail Cap(c_a), veh/h	522	0	790	63	616	743	329	0	320	551	0	929
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.5	0.0	25.5	55.8	45.9	19.7	49.6	0.0	49.8	38.3	0.0	14.0
Incr Delay (d2), s/veh	26.8	0.0	2.6	28.7	10.0	0.4	2.5	0.0	3.1	27.1	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.5	0.0	14.1	0.7	8.2	9.0	4.2	0.0	4.3	20.1	0.0	9.9
LnGrp Delay(d),s/veh	66.3	0.0	28.1	84.5	55.9	20.1	52.1	0.0	52.9	65.4	0.0	14.9
LnGrp LOS	E		C	F	E	C	D		D	E		B
Approach Vol, veh/h		1023			792			272			1038	
Approach Delay, s/veh		46.1			43.5			52.5			40.4	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.3	53.7		38.9	36.4	22.5		15.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	49.0		35.0	33.3	19.7		21.0
Max Q Clear Time (g_c+I1), s	3.1	29.3		34.5	32.1	17.1		10.8
Green Ext Time (p_c), s	0.0	9.4		0.3	0.3	1.4		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	44.1
HCM 2010 LOS	D

Notes

User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	80	114	50	685	720	75
Future Volume (vph)	80	114	50	685	720	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.95	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1679	1583	1770	1863	1833	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1679	1583	1770	1863	1833	
Peak-hour factor, PHF	0.55	0.55	0.93	0.93	0.79	0.79
Adj. Flow (vph)	145	207	54	737	911	95
RTOR Reduction (vph)	0	182	0	0	3	0
Lane Group Flow (vph)	145	25	54	737	1003	0
Confl. Peds. (#/hr)	16					5
Confl. Bikes (#/hr)						1
Turn Type	Perm	Perm	Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases	4	4				
Actuated Green, G (s)	13.1	13.1	3.0	72.8	65.8	
Effective Green, g (s)	13.1	13.1	3.0	72.8	65.8	
Actuated g/C Ratio	0.12	0.12	0.03	0.67	0.60	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	1.8	1.8	1.8	3.0	3.0	
Lane Grp Cap (vph)	201	189	48	1239	1102	
v/s Ratio Prot			c0.03	0.40	c0.55	
v/s Ratio Perm	c0.09	0.02				
v/c Ratio	0.72	0.13	1.12	0.59	0.91	
Uniform Delay, d1	46.4	43.1	53.2	10.1	19.2	
Progression Factor	1.00	1.00	1.00	1.00	0.44	
Incremental Delay, d2	10.3	0.1	168.8	0.8	7.2	
Delay (s)	56.7	43.2	221.9	10.9	15.6	
Level of Service	E	D	F	B	B	
Approach Delay (s)	48.7			25.3	15.6	
Approach LOS	D			C	B	

Intersection Summary			
HCM 2000 Control Delay	24.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	109.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	97	17	666	99	21	698
Future Volume (vph)	97	17	666	99	21	698
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	1.00			1.00
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	0.97	1.00	1.00			1.00
Frt	1.00	0.85	0.98			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1713	1583	1830			1860
Flt Permitted	0.95	1.00	1.00			0.96
Satd. Flow (perm)	1713	1583	1830			1797
Peak-hour factor, PHF	0.88	0.88	0.93	0.93	0.79	0.79
Adj. Flow (vph)	110	19	716	106	27	884
RTOR Reduction (vph)	0	17	4	0	0	0
Lane Group Flow (vph)	110	2	818	0	0	911
Confl. Peds. (#/hr)	10					
Turn Type	Perm	Perm	NA		Perm	NA
Protected Phases			2			6
Permitted Phases	3	3			6	
Actuated Green, G (s)	11.5	11.5	72.8			65.8
Effective Green, g (s)	11.5	11.5	72.8			65.8
Actuated g/C Ratio	0.11	0.11	0.67			0.60
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	2.1	2.1	3.0			3.0
Lane Grp Cap (vph)	180	166	1217			1080
v/s Ratio Prot			c0.45			
v/s Ratio Perm	c0.06	0.00				c0.51
v/c Ratio	0.61	0.01	0.67			0.84
Uniform Delay, d1	46.8	43.9	11.1			17.6
Progression Factor	1.00	1.00	0.46			1.00
Incremental Delay, d2	4.4	0.0	1.2			6.1
Delay (s)	51.3	43.9	6.2			23.8
Level of Service	D	D	A			C
Approach Delay (s)	50.2		6.2			23.8
Approach LOS	D		A			C

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	109.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	212.2
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	31	100	661	0	65	94	1	0	561	18	92
Future Vol, veh/h	0	31	100	661	0	65	94	1	0	561	18	92
Peak Hour Factor	0.92	0.69	0.69	0.69	0.92	0.88	0.88	0.88	0.92	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	45	145	958	0	74	107	1	0	652	21	107
Number of Lanes	0	1	1	1	0	1	2	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	3
HCM Control Delay	377.6	15.9	34.9
HCM LOS	F	C	D

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	94%	0%	100%	0%	0%	100%	0%	0%	12%	0%
Vol Thru, %	0%	6%	0%	0%	100%	0%	0%	100%	97%	88%	0%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	3%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	292	287	92	31	100	661	65	63	32	16	36
LT Vol	292	269	0	31	0	0	65	0	0	2	0
Through Vol	0	18	0	0	100	0	0	63	31	14	0
RT Vol	0	0	92	0	0	661	0	0	1	0	36
Lane Flow Rate	339	334	107	45	145	958	74	71	37	25	55
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.778	0.764	0.21	0.106	0.323	1.944	0.2	0.183	0.094	0.065	0.135
Departure Headway (Hd)	9.655	9.624	8.446	8.524	8.016	7.305	11.227	10.71	10.688	11.019	10.257
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	377	377	428	419	446	498	322	338	337	327	352
Service Time	7.355	7.324	6.146	6.303	5.795	5.084	8.927	8.41	8.388	8.719	7.957
HCM Lane V/C Ratio	0.899	0.886	0.25	0.107	0.325	1.924	0.23	0.21	0.11	0.076	0.156
HCM Control Delay	39.1	37.5	13.4	12.3	14.6	449.6	16.7	15.8	14.5	14.5	14.6
HCM Lane LOS	E	E	B	B	B	F	C	C	B	B	B
HCM 95th-tile Q	6.5	6.2	0.8	0.4	1.4	63.2	0.7	0.7	0.3	0.2	0.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↰	↱
Traffic Vol, veh/h	0	2	14	36
Future Vol, veh/h	0	2	14	36
Peak Hour Factor	0.92	0.65	0.65	0.65
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	3	22	55
Number of Lanes	0	0	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	14.6
HCM LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	387	50	76	561	7	135	3	95	102	15	47
Future Volume (veh/h)	11	387	50	76	561	7	135	3	95	102	15	47
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.77	1.00		0.69	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	13	466	60	90	668	8	229	5	161	262	38	121
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.83	0.83	0.83	0.84	0.84	0.84	0.59	0.59	0.59	0.39	0.39	0.39
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	17	575	475	104	667	437	271	10	310	269	113	359
Arrive On Green	0.01	0.31	0.31	0.06	0.36	0.36	0.15	0.29	0.29	0.15	0.29	0.29
Sat Flow, veh/h	1774	1863	1537	1774	1863	1221	1774	33	1075	1774	392	1250
Grp Volume(v), veh/h	13	466	60	90	668	8	229	0	166	262	0	159
Grp Sat Flow(s),veh/h/ln	1774	1863	1537	1774	1863	1221	1774	0	1108	1774	0	1642
Q Serve(g_s), s	0.6	19.7	2.4	4.3	30.6	0.4	10.7	0.0	10.7	12.6	0.0	6.5
Cycle Q Clear(g_c), s	0.6	19.7	2.4	4.3	30.6	0.4	10.7	0.0	10.7	12.6	0.0	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.76
Lane Grp Cap(c), veh/h	17	575	475	104	667	437	271	0	319	269	0	472
V/C Ratio(X)	0.79	0.81	0.13	0.87	1.00	0.02	0.85	0.00	0.52	0.97	0.00	0.34
Avail Cap(c_a), veh/h	62	620	512	104	667	437	415	0	350	269	0	472
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.3	27.3	21.3	40.0	27.5	17.8	35.3	0.0	25.5	36.1	0.0	24.1
Incr Delay (d2), s/veh	25.4	8.0	0.2	48.0	35.3	0.0	9.5	0.0	1.3	46.8	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	11.4	1.0	3.5	22.1	0.1	6.0	0.0	3.4	9.6	0.0	3.0
LnGrp Delay(d),s/veh	67.7	35.3	21.4	87.9	62.8	17.8	44.8	0.0	26.8	82.9	0.0	24.2
LnGrp LOS	E	D	C	F	F	B	D		C	F		C
Approach Vol, veh/h		539			766			395			421	
Approach Delay, s/veh		34.5			65.3			37.2			60.7	
Approach LOS		C			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	30.9	17.0	28.7	4.8	35.1	17.1	28.6
Change Period (Y+Rc), s	4.0	4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	5.0	28.5	13.0	27.0	3.0	30.5	20.0	20.0
Max Q Clear Time (g_c+I1), s	6.3	21.7	14.6	12.7	2.6	32.6	12.7	8.5
Green Ext Time (p_c), s	0.0	4.7	0.0	0.9	0.0	0.0	0.4	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	51.3
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	82.1
Intersection LOS	F

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Lane Configurations									
Traffic Vol, veh/h	0	119	593	0	415	47	0	81	182
Future Vol, veh/h	0	119	593	0	415	47	0	81	182
Peak Hour Factor	0.92	0.86	0.86	0.92	0.90	0.90	0.92	0.73	0.73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	138	690	0	461	52	0	111	249
Number of Lanes	0	1	1	0	1	0	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	132.3	47.6	15.8
HCM LOS	F	E	C

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	90%	0%	0%
Vol Right, %	0%	0%	10%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	119	593	462	81	182
LT Vol	119	0	0	81	0
Through Vol	0	593	415	0	0
RT Vol	0	0	47	0	182
Lane Flow Rate	138	690	513	111	249
Geometry Grp	7	7	4	7	7
Degree of Util (X)	0.274	1.269	0.919	0.249	0.477
Departure Headway (Hd)	7.135	6.624	6.79	8.543	7.302
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	504	552	539	423	496
Service Time	4.882	4.371	4.79	6.243	5.002
HCM Lane V/C Ratio	0.274	1.25	0.952	0.262	0.502
HCM Control Delay	12.6	156.3	47.6	14.1	16.5
HCM Lane LOS	B	F	E	B	C
HCM 95th-tile Q	1.1	27.5	11.1	1	2.5

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	34	390	35	40	48	0	0	48	24
Future Vol, veh/h	0	0	0	34	390	35	40	48	0	0	48	24
Conflicting Peds, #/hr	0	0	0	1	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	82	82	82	77	77	77	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	41	476	43	52	62	0	0	67	33

Major/Minor	Major2			Minor1		Minor2			
Conflicting Flow All	1	0	0	631	602	-	-	581	497
Stage 1	-	-	-	1	1	-	-	580	-
Stage 2	-	-	-	630	601	-	-	1	-
Critical Hdwy	4.12	-	-	7.12	6.52	-	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-	-	-	-
Follow-up Hdwy	2.218	-	-	3.518	4.018	-	-	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	394	414	0	0	425	573
Stage 1	-	-	-	-	-	0	0	500	-
Stage 2	-	-	-	470	489	0	0	-	-
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	1622	-	-	316	399	-	-	409	573
Mov Cap-2 Maneuver	-	-	-	316	399	-	-	409	-
Stage 1	-	-	-	-	-	-	-	482	-
Stage 2	-	-	-	368	471	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0.5	17	15.2
HCM LOS		C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	316	399	1622	-	-	452
HCM Lane V/C Ratio	0.164	0.156	0.026	-	-	0.221
HCM Control Delay (s)	18.6	15.7	7.3	0	-	15.2
HCM Lane LOS	C	C	A	A	-	C
HCM 95th %tile Q(veh)	0.6	0.5	0.1	-	-	0.8

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	538	71	0	0	0	0	40	45	46	36	0
Future Vol, veh/h	48	538	71	0	0	0	0	40	45	46	36	0
Conflicting Peds, #/hr	0	0	1	0	0	0	0	0	2	2	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	85	-	100	0	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	92	92	92	77	77	77	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	640	85	0	0	0	0	52	58	64	50	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	0	0	0	-	798	686	825	840	-
Stage 1	-	-	-	-	798	-	0	0	-
Stage 2	-	-	-	-	0	-	825	840	-
Critical Hdwy	4.12	-	-	-	6.52	6.22	7.12	6.52	-
Critical Hdwy Stg 1	-	-	-	-	5.52	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	-	4.018	3.318	3.518	4.018	-
Pot Cap-1 Maneuver	-	-	-	0	319	447	292	302	0
Stage 1	-	-	-	0	398	-	-	-	0
Stage 2	-	-	-	0	-	-	367	381	0
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	-	319	447	222	302	-
Mov Cap-2 Maneuver	-	-	-	-	319	-	222	302	-
Stage 1	-	-	-	-	398	-	-	-	-
Stage 2	-	-	-	-	-	-	277	381	-

Approach	EB	NB	SB
HCM Control Delay, s		15.7	24
HCM LOS		C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	SBLn1	SBLn2
Capacity (veh/h)	319	319	447	-	-	-	222	302
HCM Lane V/C Ratio	0.081	0.081	0.131	-	-	-	0.288	0.166
HCM Control Delay (s)	17.3	17.3	14.3	-	-	-	27.6	19.3
HCM Lane LOS	C	C	B	-	-	-	D	C
HCM 95th %tile Q(veh)	0.3	0.3	0.4	-	-	-	1.1	0.6

Intersection	
Intersection Delay, s/veh	111
Intersection LOS	F

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations									
Traffic Vol, veh/h	0	308	178	0	369	357	0	142	520
Future Vol, veh/h	0	308	178	0	369	357	0	142	520
Peak Hour Factor	0.92	0.94	0.94	0.92	0.92	0.92	0.92	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	328	189	0	401	388	0	171	627
Number of Lanes	0	1	1	0	1	2	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	40.1	40.1	227
HCM LOS	E	E	F

Lane	NBLn1	NBLn2	NBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	369	179	179	308	178	142	520
LT Vol	0	0	0	308	0	142	0
Through Vol	369	0	0	0	0	0	520
RT Vol	0	179	179	0	178	0	0
Lane Flow Rate	401	194	194	328	189	171	627
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.947	0.42	0.327	0.86	0.434	0.449	1.553
Departure Headway (Hd)	9.334	8.606	6.803	10.41	9.165	9.444	8.924
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	393	421	532	351	396	382	413
Service Time	7.034	6.306	4.503	8.11	6.865	7.194	6.674
HCM Lane V/C Ratio	1.02	0.461	0.365	0.934	0.477	0.448	1.518
HCM Control Delay	64.3	17.4	12.8	52.5	18.7	19.7	283.6
HCM Lane LOS	F	C	B	F	C	C	F
HCM 95th-tile Q	10.5	2	1.4	8	2.1	2.3	34.5

HCM Signalized Intersection Capacity Analysis
10: Crow Canyon Rd/Blackhawk Rd & Camino Tassajara

Timing Plan: School PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	244	859	342	411	495	243	395	533	500	391	487	196
Future Volume (vph)	244	859	342	411	495	243	395	533	500	391	487	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Lane Util. Factor	0.97	0.95	1.00	0.94	0.95		0.97	0.91	0.91	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.96	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1560	4990	3348		3433	3248	1417	3433	3539	1559
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1560	4990	3348		3433	3248	1417	3433	3539	1559
Peak-hour factor, PHF	0.88	0.88	0.88	0.87	0.87	0.87	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	277	976	389	472	569	279	429	579	543	449	560	225
RTOR Reduction (vph)	0	0	222	0	48	0	0	25	138	0	0	162
Lane Group Flow (vph)	277	976	167	472	800	0	429	749	210	449	560	63
Confl. Peds. (#/hr)						3			5			2
Confl. Bikes (#/hr)			4									2
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	12.5	38.0	38.0	11.6	37.1		16.5	35.3	35.3	15.7	34.1	34.1
Effective Green, g (s)	12.5	38.0	38.0	11.6	37.1		16.5	35.3	35.3	15.7	34.1	34.1
Actuated g/C Ratio	0.10	0.31	0.31	0.10	0.31		0.14	0.29	0.29	0.13	0.28	0.28
Clearance Time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	354	1111	489	478	1026		468	947	413	445	997	439
v/s Ratio Prot	0.08	c0.28		c0.09	0.24		0.12	c0.23		c0.13	0.16	
v/s Ratio Perm			0.11						0.15			0.04
v/c Ratio	0.78	0.88	0.34	0.99	0.78		0.92	0.79	0.51	1.01	0.56	0.14
Uniform Delay, d1	52.9	39.3	31.9	54.6	38.2		51.6	39.5	35.6	52.6	37.1	32.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.0	8.3	0.6	37.4	4.0		22.3	4.8	1.3	44.9	0.9	0.2
Delay (s)	62.9	47.6	32.5	92.1	42.3		73.8	44.3	37.0	97.6	38.0	32.7
Level of Service	E	D	C	F	D		E	D	D	F	D	C
Approach Delay (s)		46.6			60.1			50.8			58.7	
Approach LOS		D			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	53.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	121.0	Sum of lost time (s)	20.8
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM 2010 Signalized Intersection Summary
1: Diablo Rd & El Cerro Blvd & Ackerman Dr

Timing Plan: PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	333	58	624	300	2	70	30	819	7	19	6
Future Volume (veh/h)	2	333	58	624	300	2	70	30	819	7	19	6
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.97
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	2	378	66	693	333	2	79	34	920	12	32	10
Adj No. of Lanes	1	2	0	2	1	0	0	1	2	0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.90	0.90	0.90	0.89	0.89	0.89	0.60	0.60	0.60
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	640	111	792	817	5	366	157	1439	19	51	16
Arrive On Green	0.00	0.21	0.21	0.23	0.44	0.44	0.29	0.29	0.29	0.05	0.05	0.05
Sat Flow, veh/h	1774	3002	519	3442	1849	11	1258	542	2744	394	1051	328
Grp Volume(v), veh/h	2	221	223	693	0	335	113	0	920	54	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1751	1721	0	1860	1800	0	1372	1773	0	0
Q Serve(g_s), s	0.1	8.3	8.5	14.3	0.0	9.0	3.5	0.0	17.8	2.2	0.0	0.0
Cycle Q Clear(g_c), s	0.1	8.3	8.5	14.3	0.0	9.0	3.5	0.0	17.8	2.2	0.0	0.0
Prop In Lane	1.00		0.30	1.00		0.01	0.70		1.00	0.22		0.19
Lane Grp Cap(c), veh/h	3	378	374	792	0	822	523	0	1439	86	0	0
V/C Ratio(X)	0.69	0.59	0.60	0.87	0.00	0.41	0.22	0.00	0.64	0.62	0.00	0.00
Avail Cap(c_a), veh/h	132	504	499	934	0	896	586	0	1535	577	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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.8	26.1	26.1	27.4	0.0	14.0	19.8	0.0	12.7	34.4	0.0	0.0
Incr Delay (d2), s/veh	72.8	2.1	2.2	7.4	0.0	0.5	0.1	0.0	0.6	7.2	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	0.1	4.3	4.3	7.5	0.0	4.8	1.7	0.0	6.8	1.3	0.0	0.0
LnGrp Delay(d),s/veh	109.6	28.1	28.3	34.7	0.0	14.5	19.9	0.0	13.3	41.6	0.0	0.0
LnGrp LOS	F	C	C	C		B	B		B	D		
Approach Vol, veh/h		446			1028			1033			54	
Approach Delay, s/veh		28.6			28.1			14.0			41.6	
Approach LOS		C			C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	21.0	19.7		7.6	4.1	36.6		25.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	20.0	21.0		24.0	5.5	35.5		24.0
Max Q Clear Time (g_c+I1), s	16.3	10.5		4.2	2.1	11.0		19.8
Green Ext Time (p_c), s	0.7	4.5		0.2	0.0	7.0		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	22.8
HCM 2010 LOS	C

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	995	11	11	844	11	0	0	0	17	0	38
Future Volume (veh/h)	59	995	11	11	844	11	0	0	0	17	0	38
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	66	1106	12	12	927	12				21	0	47
Adj No. of Lanes	1	2	0	1	2	0				0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91				0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	79	2058	22	17	1927	25				33	0	75
Arrive On Green	0.04	0.57	0.57	0.01	0.54	0.54				0.07	0.00	0.07
Sat Flow, veh/h	1774	3585	39	1774	3576	46				498	0	1115
Grp Volume(v), veh/h	66	546	572	12	459	480				68	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1855	1774	1770	1853				1613	0	0
Q Serve(g_s), s	1.3	6.5	6.5	0.2	5.5	5.5				1.4	0.0	0.0
Cycle Q Clear(g_c), s	1.3	6.5	6.5	0.2	5.5	5.5				1.4	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.02				0.31		0.69
Lane Grp Cap(c), veh/h	79	1016	1064	17	953	998				108	0	0
V/C Ratio(X)	0.83	0.54	0.54	0.72	0.48	0.48				0.63	0.00	0.00
Avail Cap(c_a), veh/h	289	1057	1108	284	1052	1101				1034	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	16.3	4.5	4.5	17.0	4.9	4.9				15.6	0.0	0.0
Incr Delay (d2), s/veh	8.3	0.7	0.6	18.9	0.5	0.5				2.2	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
%ile BackOfQ(50%),veh/ln	0.8	3.2	3.4	0.2	2.8	2.9				0.7	0.0	0.0
LnGrp Delay(d),s/veh	24.5	5.2	5.2	35.9	5.5	5.4				17.8	0.0	0.0
LnGrp LOS	C	A	A	D	A	A				B		
Approach Vol, veh/h		1184			951						68	
Approach Delay, s/veh		6.2			5.8						17.8	
Approach LOS		A			A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	4.3	23.7		6.3	5.5	22.5		
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s	5.5	20.5		22.0	5.6	20.4		
Max Q Clear Time (g_c+I1), s	2.2	8.5		3.4	3.3	7.5		
Green Ext Time (p_c), s	0.0	10.3		0.2	0.0	10.9		

Intersection Summary	
HCM 2010 Ctrl Delay	6.4
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
3: McCauley Rd/Green Valley Rd & Diablo Rd

Timing Plan: PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	638	337	68	14	330	370	57	24	8	226	16	450
Future Volume (veh/h)	638	337	68	14	330	370	57	24	8	226	16	450
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.91	1.00		1.00	1.00		0.99
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	709	374	76	15	359	402	67	28	9	276	20	549
Adj No. of Lanes	1	1	0	1	2	1	1	1	0	0	1	1
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.85	0.85	0.85	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	747	882	179	18	630	568	96	73	24	326	24	976
Arrive On Green	0.42	0.59	0.59	0.01	0.18	0.18	0.05	0.05	0.05	0.20	0.20	0.20
Sat Flow, veh/h	1774	1497	304	1774	3539	1443	1774	1352	434	1660	120	1574
Grp Volume(v), veh/h	709	0	450	15	359	402	67	0	37	296	0	549
Grp Sat Flow(s),veh/h/ln	1774	0	1801	1774	1770	1443	1774	0	1786	1780	0	1574
Q Serve(g_s), s	41.1	0.0	14.6	0.9	9.9	19.0	4.0	0.0	2.1	17.1	0.0	21.0
Cycle Q Clear(g_c), s	41.1	0.0	14.6	0.9	9.9	19.0	4.0	0.0	2.1	17.1	0.0	21.0
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.24	0.93		1.00
Lane Grp Cap(c), veh/h	747	0	1061	18	630	568	96	0	97	350	0	976
V/C Ratio(X)	0.95	0.00	0.42	0.84	0.57	0.71	0.70	0.00	0.38	0.85	0.00	0.56
Avail Cap(c_a), veh/h	798	0	1061	83	630	568	349	0	351	350	0	976
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.8	0.0	12.0	52.8	40.1	26.8	49.6	0.0	48.8	41.3	0.0	12.0
Incr Delay (d2), s/veh	20.2	0.0	0.3	29.7	1.4	4.2	3.3	0.0	0.9	17.6	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.3	0.0	7.3	0.6	5.0	12.4	2.0	0.0	1.1	10.1	0.0	9.7
LnGrp Delay(d),s/veh	50.0	0.0	12.3	82.4	41.5	31.0	53.0	0.0	49.7	59.0	0.0	12.9
LnGrp LOS	D		B	F	D	C	D		D	E		B
Approach Vol, veh/h		1159			776			104			845	
Approach Delay, s/veh		35.3			36.9			51.8			29.0	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.1	66.9		25.0	49.0	23.0		9.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	62.0		21.0	48.0	19.0		21.0
Max Q Clear Time (g_c+I1), s	2.9	16.6		23.0	43.1	21.0		6.0
Green Ext Time (p_c), s	0.0	10.7		0.0	1.8	0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	34.5
HCM 2010 LOS	C

Notes

User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	69	70	35	931	624	33
Future Volume (vph)	69	70	35	931	624	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1756	1583	1770	1863	1846	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1756	1583	1770	1863	1846	
Peak-hour factor, PHF	0.72	0.72	0.91	0.91	0.88	0.88
Adj. Flow (vph)	96	97	38	1023	709	38
RTOR Reduction (vph)	0	88	0	0	1	0
Lane Group Flow (vph)	96	9	38	1023	746	0
Confl. Peds. (#/hr)	2					6
Confl. Bikes (#/hr)						1
Turn Type	Perm	Perm	Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases	4	4				
Actuated Green, G (s)	11.2	11.2	3.0	93.3	86.3	
Effective Green, g (s)	11.2	11.2	3.0	93.3	86.3	
Actuated g/C Ratio	0.09	0.09	0.02	0.73	0.68	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	1.8	1.8	1.8	3.0	3.0	
Lane Grp Cap (vph)	154	139	41	1365	1251	
v/s Ratio Prot			0.02	c0.55	0.40	
v/s Ratio Perm	c0.05	0.01				
v/c Ratio	0.62	0.06	0.93	0.75	0.60	
Uniform Delay, d1	56.0	53.2	62.0	10.1	11.1	
Progression Factor	1.00	1.00	1.00	1.00	0.46	
Incremental Delay, d2	5.5	0.1	109.8	2.3	0.6	
Delay (s)	61.6	53.3	171.8	12.4	5.7	
Level of Service	E	D	F	B	A	
Approach Delay (s)	57.4			18.1	5.7	
Approach LOS	E			B	A	

Intersection Summary			
HCM 2000 Control Delay	17.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	127.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	67	19	903	97	29	590
Future Volume (vph)	67	19	903	97	29	590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	1.00			1.00
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	0.99			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1770	1583	1835			1858
Flt Permitted	0.95	1.00	1.00			0.79
Satd. Flow (perm)	1770	1583	1835			1465
Peak-hour factor, PHF	0.76	0.76	0.91	0.91	0.88	0.88
Adj. Flow (vph)	88	25	992	107	33	670
RTOR Reduction (vph)	0	23	2	0	0	0
Lane Group Flow (vph)	88	2	1097	0	0	703
Confl. Bikes (#/hr)				2		
Turn Type	Perm	Perm	NA		Perm	NA
Protected Phases			2			6
Permitted Phases	3	3			6	
Actuated Green, G (s)	10.8	10.8	93.3			86.3
Effective Green, g (s)	10.8	10.8	93.3			86.3
Actuated g/C Ratio	0.08	0.08	0.73			0.68
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	2.1	2.1	3.0			3.0
Lane Grp Cap (vph)	150	134	1344			993
v/s Ratio Prot			c0.60			
v/s Ratio Perm	c0.05	0.00				0.48
v/c Ratio	0.59	0.02	0.82			0.71
Uniform Delay, d1	56.1	53.4	11.3			12.7
Progression Factor	1.00	1.00	0.35			1.00
Incremental Delay, d2	3.9	0.0	2.7			2.3
Delay (s)	60.0	53.4	6.6			15.0
Level of Service	E	D	A			B
Approach Delay (s)	58.6		6.6			15.0
Approach LOS	E		A			B

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	127.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	87.4
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	18	90	513	0	89	63	3	0	792	18	78
Future Vol, veh/h	0	18	90	513	0	89	63	3	0	792	18	78
Peak Hour Factor	0.92	0.87	0.87	0.87	0.92	0.72	0.72	0.72	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	21	103	590	0	124	88	4	0	861	20	85
Number of Lanes	0	1	1	1	0	1	2	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	3
HCM Control Delay	138.9	16.8	69.8
HCM LOS	F	C	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	96%	0%	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	0%	4%	0%	0%	100%	0%	0%	100%	88%	100%	0%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	12%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	404	406	78	18	90	513	89	42	24	11	27
LT Vol	404	388	0	18	0	0	89	0	0	0	0
Through Vol	0	18	0	0	90	0	0	42	21	11	0
RT Vol	0	0	78	0	0	513	0	0	3	0	27
Lane Flow Rate	439	441	85	21	103	590	124	58	33	18	45
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	1.003	1.006	0.166	0.051	0.242	1.279	0.345	0.155	0.088	0.052	0.119
Departure Headway (Hd)	8.769	8.747	7.56	9.074	8.566	7.81	10.517	10.003	9.913	10.416	9.716
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	417	419	477	397	422	466	344	360	364	346	371
Service Time	6.469	6.447	5.26	6.774	6.266	5.553	8.217	7.703	7.613	8.116	7.416
HCM Lane V/C Ratio	1.053	1.053	0.178	0.053	0.244	1.266	0.36	0.161	0.091	0.052	0.121
HCM Control Delay	75.1	75.7	11.8	12.3	14	165.3	18.7	14.5	13.6	13.7	13.7
HCM Lane LOS	F	F	B	B	B	F	C	B	B	B	B
HCM 95th-tile Q	12.5	12.6	0.6	0.2	0.9	24.8	1.5	0.5	0.3	0.2	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↰	↱
Traffic Vol, veh/h	0	0	11	27
Future Vol, veh/h	0	0	11	27
Peak Hour Factor	0.92	0.60	0.60	0.60
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	0	18	45
Number of Lanes	0	0	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	13.7
HCM LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	446	56	123	769	1	52	6	129	19	0	8
Future Volume (veh/h)	1	446	56	123	769	1	52	6	129	19	0	8
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.95	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	1	474	60	129	809	1	88	10	219	46	0	20
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.59	0.59	0.59	0.41	0.41	0.41
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	791	653	163	961	792	114	15	323	57	0	303
Arrive On Green	0.00	0.42	0.42	0.09	0.52	0.52	0.06	0.22	0.22	0.03	0.00	0.19
Sat Flow, veh/h	1774	1863	1537	1774	1863	1535	1774	66	1448	1774	0	1583
Grp Volume(v), veh/h	1	474	60	129	809	1	88	0	229	46	0	20
Grp Sat Flow(s),veh/h/ln	1774	1863	1537	1774	1863	1535	1774	0	1515	1774	0	1583
Q Serve(g_s), s	0.0	14.2	1.7	5.2	26.9	0.0	3.5	0.0	10.0	1.9	0.0	0.7
Cycle Q Clear(g_c), s	0.0	14.2	1.7	5.2	26.9	0.0	3.5	0.0	10.0	1.9	0.0	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.96	1.00		1.00
Lane Grp Cap(c), veh/h	2	791	653	163	961	792	114	0	338	57	0	303
V/C Ratio(X)	0.41	0.60	0.09	0.79	0.84	0.00	0.77	0.00	0.68	0.80	0.00	0.07
Avail Cap(c_a), veh/h	74	888	733	221	1043	859	245	0	565	74	0	438
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.1	16.1	12.5	32.2	15.0	8.5	33.3	0.0	25.7	34.8	0.0	24.0
Incr Delay (d2), s/veh	35.8	1.2	0.1	9.0	6.3	0.0	10.5	0.0	2.4	30.1	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	0.0	7.5	0.7	2.9	15.4	0.0	2.1	0.0	4.4	1.4	0.0	0.3
LnGrp Delay(d),s/veh	71.9	17.3	12.5	41.2	21.3	8.5	43.9	0.0	28.1	64.9	0.0	24.0
LnGrp LOS	E	B	B	D	C	A	D		C	E		C
Approach Vol, veh/h		535			939			317			66	
Approach Delay, s/veh		16.8			24.1			32.5			52.5	
Approach LOS		B			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	35.2	6.3	20.2	4.1	41.8	8.6	17.8
Change Period (Y+Rc), s	4.0	4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	9.0	34.5	3.0	27.0	3.0	40.5	10.0	20.0
Max Q Clear Time (g_c+I1), s	7.2	16.2	3.9	12.0	2.0	28.9	5.5	2.7
Green Ext Time (p_c), s	0.0	12.0	0.0	1.4	0.0	8.4	0.1	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.4
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	43.5
Intersection LOS	E

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Lane Configurations									
Traffic Vol, veh/h	0	67	386	0	474	66	0	147	143
Future Vol, veh/h	0	67	386	0	474	66	0	147	143
Peak Hour Factor	0.92	0.82	0.82	0.92	0.94	0.94	0.92	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	82	471	0	504	70	0	186	181
Number of Lanes	0	1	1	0	1	0	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	36.3	68.7	15
HCM LOS	E	F	B

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	88%	0%	0%
Vol Right, %	0%	0%	12%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	67	386	540	147	143
LT Vol	67	0	0	147	0
Through Vol	0	386	474	0	0
RT Vol	0	0	66	0	143
Lane Flow Rate	82	471	574	186	181
Geometry Grp	7	7	4	7	7
Degree of Util (X)	0.164	0.877	1.02	0.419	0.346
Departure Headway (Hd)	7.317	6.804	6.389	8.214	6.978
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	494	537	563	441	520
Service Time	5.017	4.504	4.478	5.914	4.678
HCM Lane V/C Ratio	0.166	0.877	1.02	0.422	0.348
HCM Control Delay	11.4	40.6	68.7	16.7	13.3
HCM Lane LOS	B	E	F	C	B
HCM 95th-tile Q	0.6	9.7	15.3	2	1.5

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	58	446	44	30	41	0	0	26	22
Future Vol, veh/h	0	0	0	58	446	44	30	41	0	0	26	22
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	0	0	0	2
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	66	66	66	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	63	485	48	45	62	0	0	28	24

Major/Minor	Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	663	659	-	-	635	511
Stage 1	-	-	-	0	0	-	-	635	-
Stage 2	-	-	-	663	659	-	-	0	-
Critical Hdwy	4.12	-	-	7.12	6.52	-	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-	-	-	-
Follow-up Hdwy	2.218	-	-	3.518	4.018	-	-	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	375	384	0	0	396	563
Stage 1	-	-	-	-	-	0	0	472	-
Stage 2	-	-	-	450	461	0	0	-	-
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	339	384	-	-	396	563
Mov Cap-2 Maneuver	-	-	-	339	384	-	-	396	-
Stage 1	-	-	-	-	-	-	-	472	-
Stage 2	-	-	-	405	461	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		16.7	13.9
HCM LOS		C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	339	384	-	-	-	458
HCM Lane V/C Ratio	0.134	0.162	-	-	-	0.114
HCM Control Delay (s)	17.3	16.2	-	-	-	13.9
HCM Lane LOS	C	C	-	-	-	B
HCM 95th %tile Q(veh)	0.5	0.6	-	-	-	0.4

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	429	56	0	0	0	0	31	34	24	60	0
Future Vol, veh/h	40	429	56	0	0	0	0	31	34	24	60	0
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	3	3	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	85	-	100	0	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	92	92	92	66	66	66	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	523	68	0	0	0	0	47	52	26	65	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	0	0	0	-	657	562	681	691	-
Stage 1	-	-	-	-	657	-	0	0	-
Stage 2	-	-	-	-	0	-	681	691	-
Critical Hdwy	4.12	-	-	-	6.52	6.22	7.12	6.52	-
Critical Hdwy Stg 1	-	-	-	-	5.52	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	-	4.018	3.318	3.518	4.018	-
Pot Cap-1 Maneuver	-	-	-	0	385	526	364	368	0
Stage 1	-	-	-	0	462	-	-	-	0
Stage 2	-	-	-	0	-	-	440	446	0
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	-	384	525	298	367	-
Mov Cap-2 Maneuver	-	-	-	-	384	-	298	367	-
Stage 1	-	-	-	-	461	-	-	-	-
Stage 2	-	-	-	-	-	-	356	445	-

Approach	EB	NB	SB
HCM Control Delay, s		13.7	17.3
HCM LOS		B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	SBLn1	SBLn2
Capacity (veh/h)	384	384	525	-	-	-	298	367
HCM Lane V/C Ratio	0.061	0.061	0.098	-	-	-	0.088	0.178
HCM Control Delay (s)	15	15	12.6	-	-	-	18.2	16.9
HCM Lane LOS	C	C	B	-	-	-	C	C
HCM 95th %tile Q(veh)	0.2	0.2	0.3	-	-	-	0.3	0.6

Intersection	
Intersection Delay, s/veh	83.4
Intersection LOS	F

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations									
Traffic Vol, veh/h	0	290	95	0	502	354	0	112	408
Future Vol, veh/h	0	290	95	0	502	354	0	112	408
Peak Hour Factor	0.92	0.89	0.89	0.92	0.95	0.95	0.92	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	326	107	0	528	373	0	137	498
Number of Lanes	0	1	1	0	1	2	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	40.2	86.6	108.2
HCM LOS	E	F	F

Lane	NBLn1	NBLn2	NBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	502	177	177	290	95	112	408
LT Vol	0	0	0	290	0	112	0
Through Vol	502	0	0	0	0	0	408
RT Vol	0	177	177	0	95	0	0
Lane Flow Rate	528	186	186	326	107	137	498
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	1.2	0.387	0.297	0.844	0.241	0.344	1.183
Departure Headway (Hd)	8.629	7.905	6.109	10.043	8.801	9.462	8.942
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	423	458	592	365	411	382	408
Service Time	6.329	5.605	3.809	7.743	6.501	7.162	6.642
HCM Lane V/C Ratio	1.248	0.406	0.314	0.893	0.26	0.359	1.221
HCM Control Delay	138.1	15.5	11.4	48.7	14.3	17	133.2
HCM Lane LOS	F	C	B	E	B	C	F
HCM 95th-tile Q	19.9	1.8	1.2	7.7	0.9	1.5	18.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	228	813	256	387	491	334	417	578	604	354	371	197
Future Volume (vph)	228	813	256	387	491	334	417	578	604	354	371	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Lane Util. Factor	0.97	0.95	1.00	0.94	0.95		0.97	0.91	0.91	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	0.99	0.97	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.96	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1556	4990	3302		3433	3216	1404	3433	3539	1563
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1556	4990	3302		3433	3216	1404	3433	3539	1563
Peak-hour factor, PHF	0.89	0.89	0.89	0.88	0.88	0.88	0.91	0.91	0.91	0.98	0.98	0.98
Adj. Flow (vph)	256	913	288	440	558	380	458	635	664	361	379	201
RTOR Reduction (vph)	0	0	194	0	105	0	0	37	113	0	0	139
Lane Group Flow (vph)	256	913	94	440	833	0	458	864	285	361	379	62
Confl. Peds. (#/hr)			5			2			1			1
Confl. Bikes (#/hr)			2			3			19			
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	10.9	36.1	36.1	7.8	33.0		11.6	36.5	36.5	9.6	34.1	34.1
Effective Green, g (s)	10.9	36.1	36.1	7.8	33.0		11.6	36.5	36.5	9.6	34.1	34.1
Actuated g/C Ratio	0.10	0.33	0.33	0.07	0.30		0.11	0.33	0.33	0.09	0.31	0.31
Clearance Time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	338	1157	508	352	987		360	1063	464	298	1093	482
v/s Ratio Prot	0.07	c0.26		c0.09	c0.25		c0.13	c0.27		0.11	0.11	
v/s Ratio Perm			0.06						0.20			0.04
v/c Ratio	0.76	0.79	0.19	1.25	0.84		1.27	0.81	0.61	1.21	0.35	0.13
Uniform Delay, d1	48.5	33.7	26.6	51.3	36.3		49.4	33.8	31.0	50.4	29.5	27.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.3	3.9	0.2	134.0	7.0		142.6	5.1	2.8	122.1	0.3	0.2
Delay (s)	56.8	37.6	26.9	185.3	43.2		192.0	38.9	33.8	172.5	29.8	27.6
Level of Service	E	D	C	F	D		F	D	C	F	C	C
Approach Delay (s)		38.8			88.6			77.7			84.1	
Approach LOS		D			F			E			F	

Intersection Summary			
HCM 2000 Control Delay	71.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	110.4	Sum of lost time (s)	20.8
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		

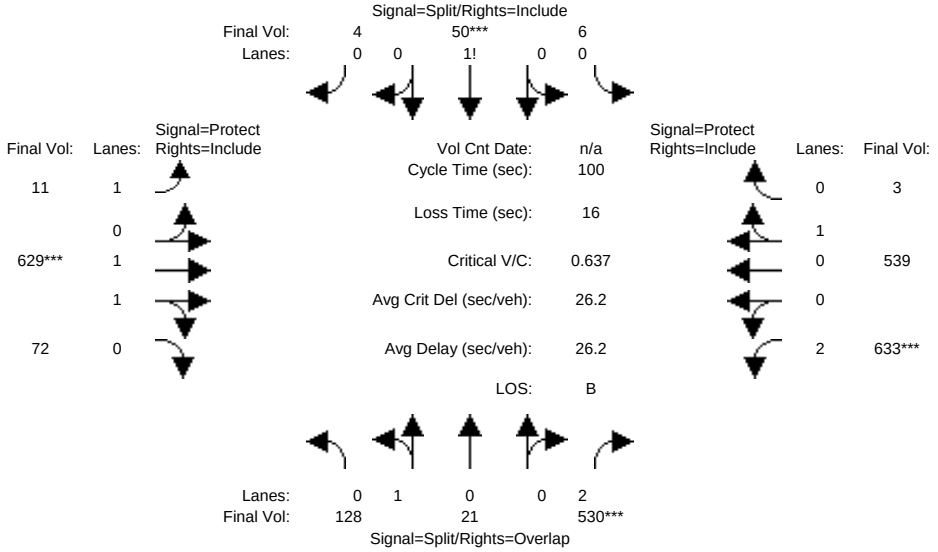
c Critical Lane Group

Appendix E LEVEL OF SERVICE WORKSHEETS: CUMULATIVE PLUS PROJECT CONDITIONS

Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040+Proj AM

Intersection #1: Daiblo Rd and El Cerro Blvd



Street Name:	Diablo Road						El Cerro Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	100	16	685	4	35	3	9	516	59	563	480	3
Growth 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
Initial Bse:	100	16	685	4	35	3	9	516	59	563	480	3
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	100	16	685	4	35	3	9	516	59	563	480	3
User 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
PHF Adj:	0.78	0.78	0.78	0.70	0.70	0.70	0.82	0.82	0.82	0.89	0.89	0.89
PHF Volume:	128	21	878	6	50	4	11	629	72	633	539	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	21	878	6	50	4	11	629	72	633	539	3
RTOR Reduct:	0	0	348	0	0	0	0	0	0	0	0	0
RTOR Vol:	128	21	530	6	50	4	11	629	72	633	539	3
PCE 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
MLF 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
FinalVolume:	128	21	530	6	50	4	11	629	72	633	539	3
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	0.86	0.14	2.00	0.10	0.83	0.07	1.00	1.79	0.21	2.00	0.99	0.01
Final Sat.:	1422	228	3000	157	1375	118	1650	2961	339	3000	1640	10
Capacity Analysis Module:												
Vol/Sat:	0.09	0.09	0.18	0.04	0.04	0.04	0.01	0.21	0.21	0.21	0.33	0.33
Crit Moves:			****		****			****		****		
Green/Cycle:	0.22	0.22	0.48	0.10	0.10	0.10	0.09	0.26	0.26	0.26	0.43	0.43
Volume/Cap:	0.41	0.41	0.37	0.36	0.36	0.36	0.07	0.81	0.81	0.81	0.76	0.76
Delay/Veh:	26.4	29.0	12.8	38.0	33.1	39.5	32.0	31.2	53.7	31.3	22.1	164.9
Delay 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
AdjDel/Veh:	26.4	29.0	12.8	38.0	33.1	39.5	32.0	31.2	53.7	31.3	22.1	164.9
DesignQueue:	7	7	8	3	3	3	1	15	15	14	19	19

Note: Queue reported is the number of cars per lane.

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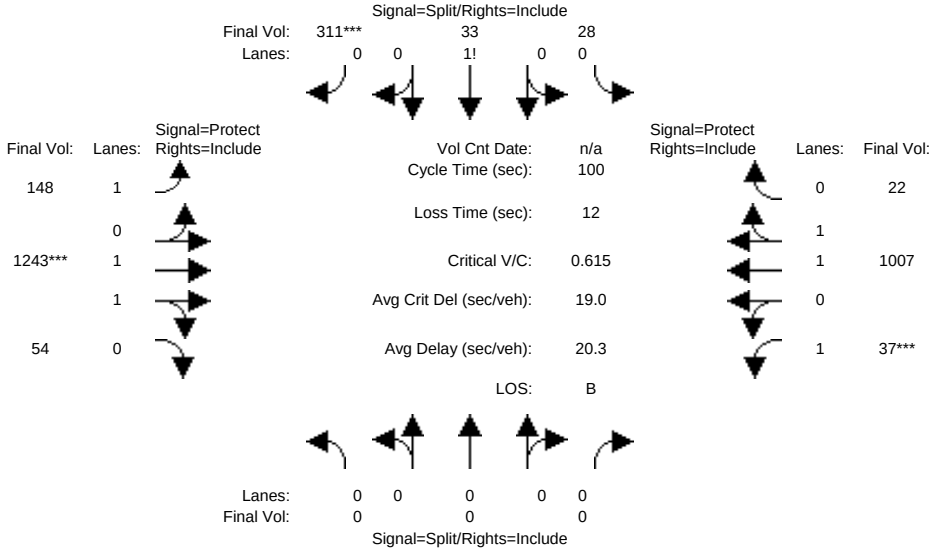
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040+Proj AM

Intersection #2: Matadera Wy and Diablo Rd



Street Name:	Metadera Way						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	13	15	143	123	1032	45	32	866	19
Growth 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
Initial Bse:	0	0	0	13	15	143	123	1032	45	32	866	19
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	13	15	143	123	1032	45	32	866	19
User 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
PHF Adj:	1.00	1.00	1.00	0.46	0.46	0.46	0.83	0.83	0.83	0.86	0.86	0.86
PHF Volume:	0	0	0	28	33	311	148	1243	54	37	1007	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	28	33	311	148	1243	54	37	1007	22
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	28	33	311	148	1243	54	37	1007	22
PCE 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
MLF 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
FinalVolume:	0	0	0	28	33	311	148	1243	54	37	1007	22
Saturation Flow Module:												
Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.07	0.09	0.84	1.00	1.92	0.08	1.00	1.96	0.04
Final Sat.:	0	0	0	131	151	1438	1720	3296	144	1720	3366	74
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.22	0.22	0.22	0.09	0.38	0.38	0.02	0.30	0.30
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.30	0.30	0.30	0.13	0.51	0.51	0.07	0.45	0.45
Volume/Cap:	0.00	0.00	0.00	0.73	0.73	0.73	0.66	0.73	0.73	0.31	0.66	0.66
Delay/Veh:	0.0	0.0	0.0	56.5	53.3	28.8	36.6	15.7	34.3	34.5	17.1	40.0
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	56.5	53.3	28.8	36.6	15.7	34.3	34.5	17.1	40.0
DesignQueue:	0	0	0	15	15	15	7	19	19	2	17	17

Note: Queue reported is the number of cars per lane.

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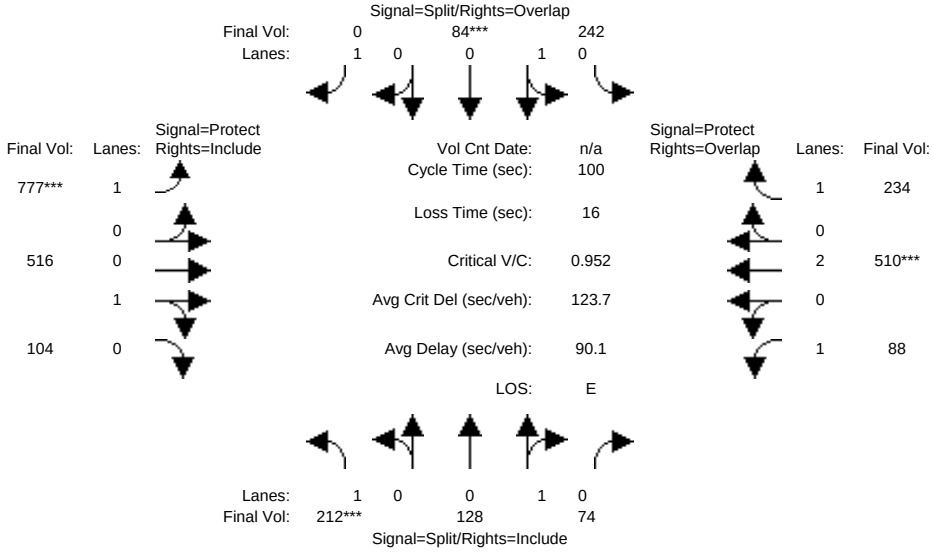
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040+Proj AM

Intersection #3: Green Valley Rd and Diablo Rd



Street Name:	Green Valeey Road						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	121	73	42	201	70	387	583	387	78	70	408	381
Growth 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
Initial Bse:	121	73	42	201	70	387	583	387	78	70	408	381
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	121	73	42	201	70	387	583	387	78	70	408	381
User 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
PHF Adj:	0.57	0.57	0.57	0.83	0.83	0.83	0.75	0.75	0.75	0.80	0.80	0.80
PHF Volume:	212	128	74	242	84	466	777	516	104	88	510	476
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	212	128	74	242	84	466	777	516	104	88	510	476
RTOR Reduct:	0	0	0	0	0	466	0	0	0	0	0	242
RTOR Vol:	212	128	74	242	84	0	777	516	104	88	510	234
PCE 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
MLF 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
FinalVolume:	212	128	74	242	84	0	777	516	104	88	510	234
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.63	0.37	0.74	0.26	1.00	1.00	0.83	0.17	1.00	2.00	1.00
Final Sat.:	1650	1047	603	1224	426	1650	1650	1373	277	1650	3300	1650
Capacity Analysis Module:												
Vol/Sat:	0.13	0.12	0.12	0.20	0.20	0.00	0.47	0.38	0.38	0.05	0.15	0.14
Crit Moves:	****				****		****				****	
Green/Cycle:	0.11	0.11	0.11	0.17	0.17	0.00	0.42	0.47	0.47	0.09	0.14	0.31
Volume/Cap:	1.13	1.08	1.08	1.13	1.13	0.00	1.13	0.81	0.81	0.61	1.13	0.46
Delay/Veh:	139.9	128	152.2	133.8	176	0.0	101.4	22.9	37.8	39.1	117	21.8
Delay 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
AdjDel/Veh:	139.9	128	152.2	133.8	176	0.0	101.4	22.9	37.8	39.1	117	21.8
DesignQueue:	11	10	10	16	16	0	28	20	20	4	13	9

Note: Queue reported is the number of cars per lane.

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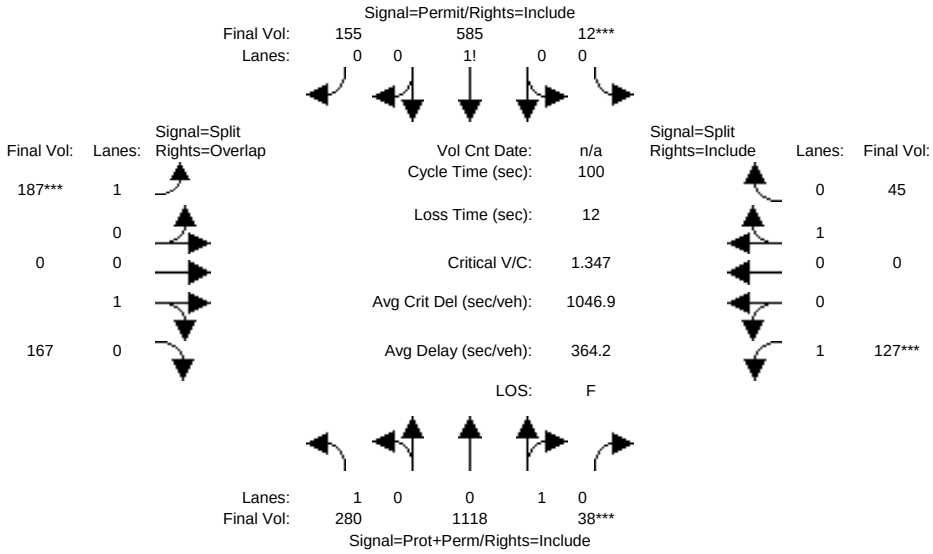
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040+Proj AM

Intersection #4: Green Valley Rd and Blemer Rd/Cameo Dr



Street Name:	Green Valley Road						Blemer Road/Cameo Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	213	850	29	9	439	116	86	0	77	108	0	38
Growth 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
Initial Bse:	213	850	29	9	439	116	86	0	77	108	0	38
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	213	850	29	9	439	116	86	0	77	108	0	38
User 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
PHF Adj:	0.76	0.76	0.76	0.75	0.75	0.75	0.46	0.46	0.46	0.85	0.85	0.85
PHF Volume:	280	1118	38	12	585	155	187	0	167	127	0	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	280	1118	38	12	585	155	187	0	167	127	0	45
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	280	1118	38	12	585	155	187	0	167	127	0	45
PCE 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
MLF 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
FinalVolume:	280	1118	38	12	585	155	187	0	167	127	0	45
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.97	0.03	0.02	0.78	0.20	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	1650	1596	54	26	1284	339	1650	0	1650	1650	0	1650
Capacity Analysis Module:												
Vol/Sat:	0.17	0.70	0.70	0.46	0.46	0.46	0.11	0.00	0.10	0.08	0.00	0.03
Crit Moves:			****	****			****			****		
Green/Cycle:	0.18	0.41	0.41	0.27	0.50	0.50	0.10	0.00	0.28	0.10	0.00	0.10
Volume/Cap:	0.92	1.70	1.70	1.70	0.92	0.92	1.13	0.00	0.36	0.77	0.00	0.27
Delay/Veh:	53.4	762	1050	1435	31.5	51.2	144.2	0.0	22.1	46.9	0.0	32.3
Delay 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
AdjDel/Veh:	53.4	762	1050	1435	31.5	51.2	144.2	0.0	22.1	46.9	0.0	32.3
DesignQueue:	13	45	45	34	24	24	10	0	7	6	0	2

Note: Queue reported is the number of cars per lane.

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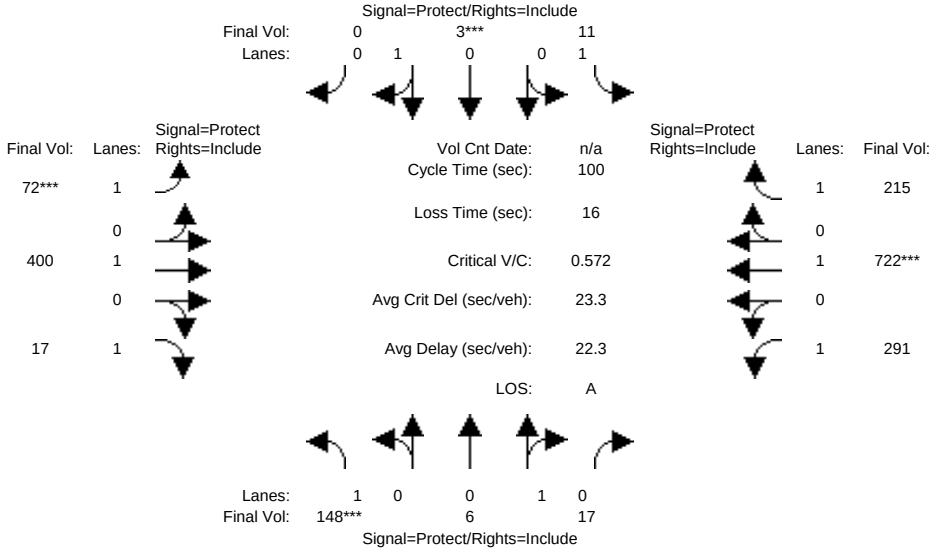
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040+Proj AM

Intersection #6: Monte Vista H.S. Main and Stone Valeey Rd



Street Name:	Monte Vista H.S. Main Parking Lot						Stone Valley Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	93	4	11	4	1	0	55	304	125	215	534	167
Growth 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
Initial Bse:	93	4	11	4	1	0	55	304	125	215	534	167
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	93	4	11	4	1	0	55	304	125	215	534	167
User 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
PHF Adj:	0.63	0.63	0.63	0.38	0.38	0.38	0.76	0.76	0.76	0.74	0.74	0.74
PHF Volume:	148	6	17	11	3	0	72	400	164	291	722	226
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	148	6	17	11	3	0	72	400	164	291	722	226
RTOR Reduct:	0	0	0	0	0	0	0	0	148	0	0	11
RTOR Vol:	148	6	17	11	3	0	72	400	17	291	722	215
PCE 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
MLF 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
FinalVolume:	148	6	17	11	3	0	72	400	17	291	722	215
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.27	0.73	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1650	440	1210	1650	1650	0	1650	1650	1650	1650	1650	1650
Capacity Analysis Module:												
Vol/Sat:	0.09	0.01	0.01	0.01	0.00	0.00	0.04	0.24	0.01	0.18	0.44	0.13
Crit Moves:	****				****		****				****	
Green/Cycle:	0.11	0.13	0.13	0.09	0.10	0.00	0.07	0.36	0.36	0.26	0.56	0.56
Volume/Cap:	0.79	0.11	0.11	0.07	0.02	0.00	0.63	0.67	0.03	0.67	0.79	0.23
Delay/Veh:	46.3	29.9	29.9	32.2	31.2	0.0	41.8	22.6	15.8	28.1	16.7	8.7
Delay 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
AdjDel/Veh:	46.3	29.9	29.9	32.2	31.2	0.0	41.8	22.6	15.8	28.1	16.7	8.7
DesignQueue:	7	1	1	1	0	0	4	15	1	12	20	5

Note: Queue reported is the number of cars per lane.

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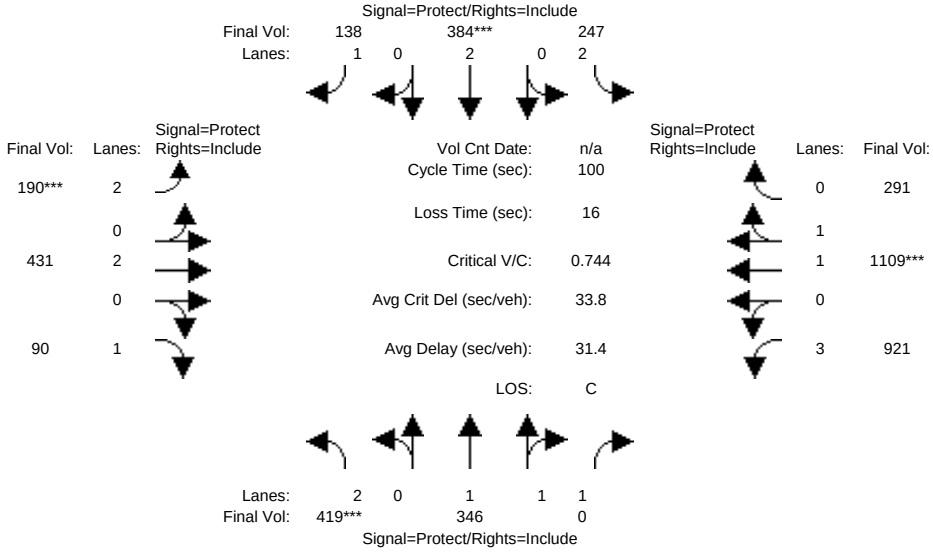
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040+Proj AM

Intersection #10: Blackhawak Rd/Crow Canyon Rd and Camino Tassajara



Street Name:	Blackhawk Rd/Crow Canyon Rd						Camino Tassajara					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	394	325	282	217	338	214	160	362	269	718	865	227
Growth 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
Initial Bse:	394	325	282	217	338	214	160	362	269	718	865	227
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	394	325	282	217	338	214	160	362	269	718	865	227
User 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
PHF Adj:	0.94	0.94	0.94	0.88	0.88	0.88	0.84	0.84	0.84	0.78	0.78	0.78
PHF Volume:	419	346	300	247	384	243	190	431	320	921	1109	291
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	419	346	300	247	384	243	190	431	320	921	1109	291
RTOR Reduct:	0	0	300	0	0	105	0	0	231	0	0	0
RTOR Vol:	419	346	0	247	384	138	190	431	90	921	1109	291
PCE 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
MLF 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
FinalVolume:	419	346	0	247	384	138	190	431	90	921	1109	291
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	0.91	1.00	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.87	1.00	1.00
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	3.00	1.58	0.42
Final Sat.:	3000	3300	1500	3000	3300	1650	3000	3300	1650	4307	2614	686
Capacity Analysis Module:												
Vol/Sat:	0.14	0.10	0.00	0.08	0.12	0.08	0.06	0.13	0.05	0.21	0.42	0.42
Crit Moves:	****				****		****				****	
Green/Cycle:	0.16	0.16	0.00	0.13	0.13	0.13	0.07	0.21	0.21	0.34	0.48	0.48
Volume/Cap:	0.89	0.65	0.00	0.65	0.89	0.64	0.89	0.63	0.26	0.63	0.89	0.89
Delay/Veh:	44.4	32.1	0.0	34.6	46.4	35.9	58.1	29.0	25.6	21.8	23.8	34.8
Delay 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
AdjDel/Veh:	44.4	32.1	0.0	34.6	46.4	35.9	58.1	29.0	25.6	21.8	23.8	34.8
DesignQueue:	10	8	0	6	10	7	5	10	4	12	22	22

Note: Queue reported is the number of cars per lane.

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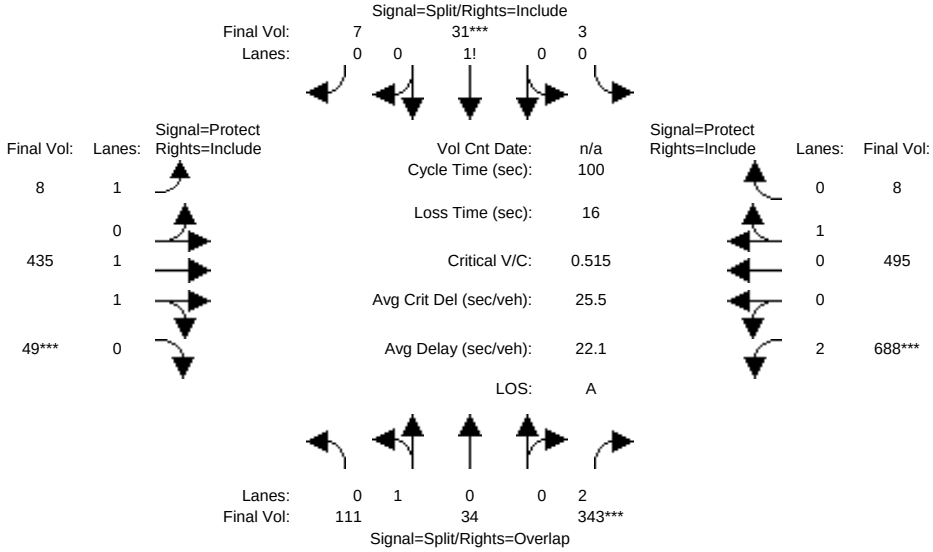
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040+Proj Shc

Intersection #1: Daiblo Rd and El Cerro Blvd



Street Name:	Diablo Road						El Cerro Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	102	31	664	2	23	5	7	400	45	633	455	7
Growth 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
Initial Bse:	102	31	664	2	23	5	7	400	45	633	455	7
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	102	31	664	2	23	5	7	400	45	633	455	7
User 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
PHF Adj:	0.92	0.92	0.92	0.75	0.75	0.75	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	111	34	722	3	31	7	8	435	49	688	495	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	34	722	3	31	7	8	435	49	688	495	8
RTOR Reduct:	0	0	378	0	0	0	0	0	0	0	0	0
RTOR Vol:	111	34	343	3	31	7	8	435	49	688	495	8
PCE 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
MLF 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
FinalVolume:	111	34	343	3	31	7	8	435	49	688	495	8
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	0.77	0.23	2.00	0.07	0.76	0.17	1.00	1.80	0.20	2.00	0.98	0.02
Final Sat.:	1265	385	3000	110	1265	275	1650	2966	334	3000	1625	25
Capacity Analysis Module:												
Vol/Sat:	0.09	0.09	0.11	0.02	0.02	0.02	0.00	0.15	0.15	0.23	0.30	0.30
Crit Moves:			****		****				****	****		
Green/Cycle:	0.17	0.17	0.52	0.10	0.10	0.10	0.11	0.22	0.22	0.35	0.46	0.46
Volume/Cap:	0.51	0.51	0.22	0.24	0.24	0.24	0.04	0.66	0.66	0.66	0.66	0.66
Delay/Veh:	30.5	33.8	10.1	34.0	32.2	32.9	30.9	29.1	40.3	22.5	17.6	67.0
Delay 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
AdjDel/Veh:	30.5	33.8	10.1	34.0	32.2	32.9	30.9	29.1	40.3	22.5	17.6	67.0
DesignQueue:	7	7	5	2	2	2	0	11	11	13	16	16

Note: Queue reported is the number of cars per lane.

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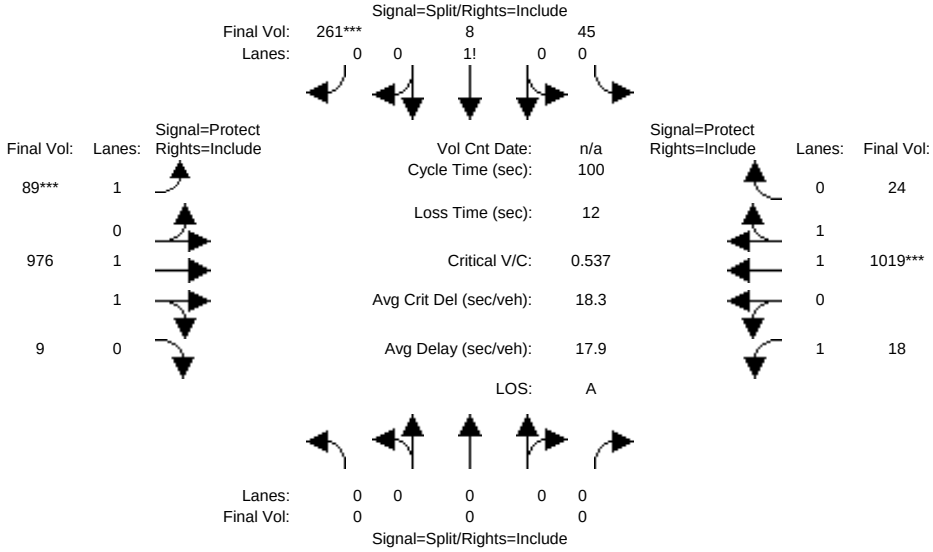
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040+Proj Shc

Intersection #2: Matadera Wy and Diablo Rd



Street Name:	Metadera Way						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	23	4	133	85	937	9	16	927	22
Growth 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
Initial Bse:	0	0	0	23	4	133	85	937	9	16	927	22
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	23	4	133	85	937	9	16	927	22
User 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
PHF Adj:	1.00	1.00	1.00	0.51	0.51	0.51	0.96	0.96	0.96	0.91	0.91	0.91
PHF Volume:	0	0	0	45	8	261	89	976	9	18	1019	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	45	8	261	89	976	9	18	1019	24
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	45	8	261	89	976	9	18	1019	24
PCE 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
MLF 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
FinalVolume:	0	0	0	45	8	261	89	976	9	18	1019	24
Saturation Flow Module:												
Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.14	0.03	0.83	1.00	1.98	0.02	1.00	1.95	0.05
Final Sat.:	0	0	0	247	43	1430	1720	3407	33	1720	3360	80
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.18	0.18	0.18	0.05	0.29	0.29	0.01	0.30	0.30
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.30	0.30	0.30	0.08	0.47	0.47	0.11	0.50	0.50
Volume/Cap:	0.00	0.00	0.00	0.61	0.61	0.61	0.61	0.61	0.61	0.09	0.61	0.61
Delay/Veh:	0.0	0.0	0.0	32.4	59.6	25.0	39.1	15.8	48.1	30.5	14.5	29.6
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	32.4	59.6	25.0	39.1	15.8	48.1	30.5	14.5	29.6
DesignQueue:	0	0	0	13	13	13	5	16	16	1	16	16

Note: Queue reported is the number of cars per lane.

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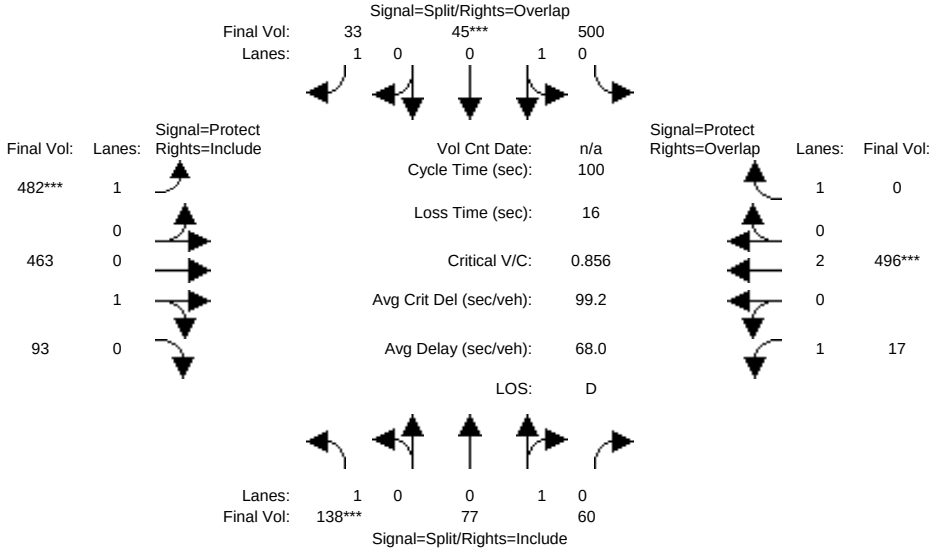
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040+Proj Shc

Intersection #3: Green Valley Rd and Diablo Rd



Street Name:	Green Valeey Road						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	72	40	31	410	37	422	472	454	91	16	461	280
Growth 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
Initial Bse:	72	40	31	410	37	422	472	454	91	16	461	280
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	72	40	31	410	37	422	472	454	91	16	461	280
User 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
PHF Adj:	0.52	0.52	0.52	0.82	0.82	0.82	0.98	0.98	0.98	0.93	0.93	0.93
PHF Volume:	138	77	60	500	45	515	482	463	93	17	496	301
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	138	77	60	500	45	515	482	463	93	17	496	301
RTOR Reduct:	0	0	0	0	0	482	0	0	0	0	0	301
RTOR Vol:	138	77	60	500	45	33	482	463	93	17	496	0
PCE 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
MLF 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
FinalVolume:	138	77	60	500	45	33	482	463	93	17	496	0
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.56	0.44	0.92	0.08	1.00	1.00	0.83	0.17	1.00	2.00	1.00
Final Sat.:	1650	930	720	1513	137	1650	1650	1374	276	1650	3300	1650
Capacity Analysis Module:												
Vol/Sat:	0.08	0.08	0.08	0.33	0.33	0.02	0.29	0.34	0.34	0.01	0.15	0.00
Crit Moves:	****				****		****				****	
Green/Cycle:	0.10	0.10	0.10	0.32	0.32	0.60	0.28	0.35	0.35	0.07	0.14	0.00
Volume/Cap:	0.84	0.83	0.83	1.04	1.04	0.03	1.04	0.96	0.96	0.14	1.04	0.00
Delay/Veh:	54.4	62.8	68.4	71.4	153	6.4	73.4	47.5	82.4	33.5	77.9	0.0
Delay 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
AdjDel/Veh:	54.4	62.8	68.4	71.4	153	6.4	73.4	47.5	82.4	33.5	77.9	0.0
DesignQueue:	7	7	7	22	22	1	21	22	22	1	12	0

Note: Queue reported is the number of cars per lane.

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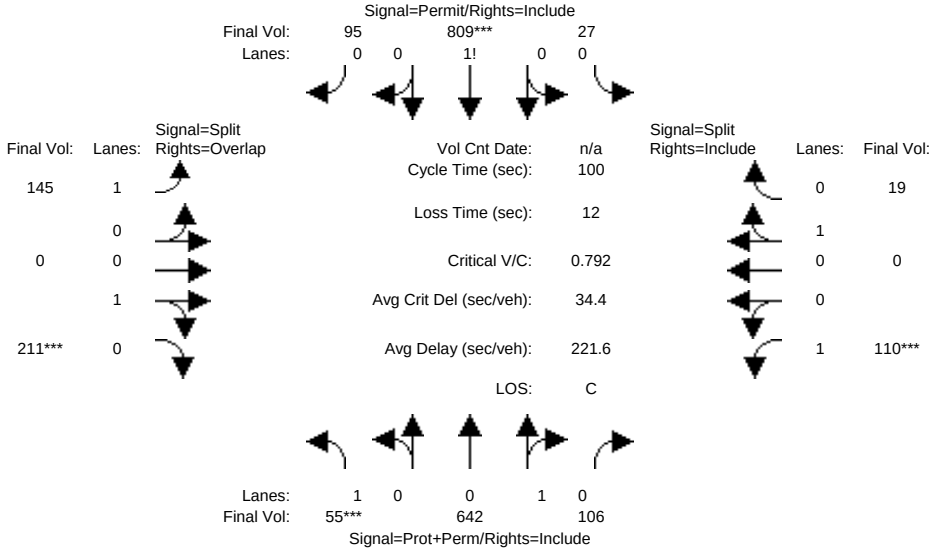
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040+Proj Shc

Intersection #4: Green Valley Rd and Blemer Rd/Cameo Dr



Street Name:	Green Valley Road						Blemer Road/Cameo Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	51	597	99	21	639	75	80	0	116	97	0	17
Growth 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
Initial Bse:	51	597	99	21	639	75	80	0	116	97	0	17
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	51	597	99	21	639	75	80	0	116	97	0	17
User 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
PHF Adj:	0.93	0.93	0.93	0.79	0.79	0.79	0.55	0.55	0.55	0.88	0.88	0.88
PHF Volume:	55	642	106	27	809	95	145	0	211	110	0	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	55	642	106	27	809	95	145	0	211	110	0	19
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	55	642	106	27	809	95	145	0	211	110	0	19
PCE 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
MLF 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
FinalVolume:	55	642	106	27	809	95	145	0	211	110	0	19
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.86	0.14	0.03	0.87	0.10	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	1650	1415	235	47	1434	168	1650	0	1650	1650	0	1650
Capacity Analysis Module:												
Vol/Sat:	0.03	0.45	0.45	0.56	0.56	0.56	0.09	0.00	0.13	0.07	0.00	0.01
Crit Moves:	****				****				****	****		
Green/Cycle:	0.07	0.29	0.29	0.36	0.58	0.58	0.13	0.00	0.20	0.10	0.00	0.10
Volume/Cap:	0.47	1.57	1.57	1.57	0.97	0.97	0.67	0.00	0.64	0.67	0.00	0.12
Delay/Veh:	36.8	542	632.2	850.4	34.3	77.3	37.2	0.0	30.9	40.1	0.0	31.6
Delay 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
AdjDel/Veh:	36.8	542	632.2	850.4	34.3	77.3	37.2	0.0	30.9	40.1	0.0	31.6
DesignQueue:	3	33	33	38	25	25	7	0	10	6	0	1

Note: Queue reported is the number of cars per lane.

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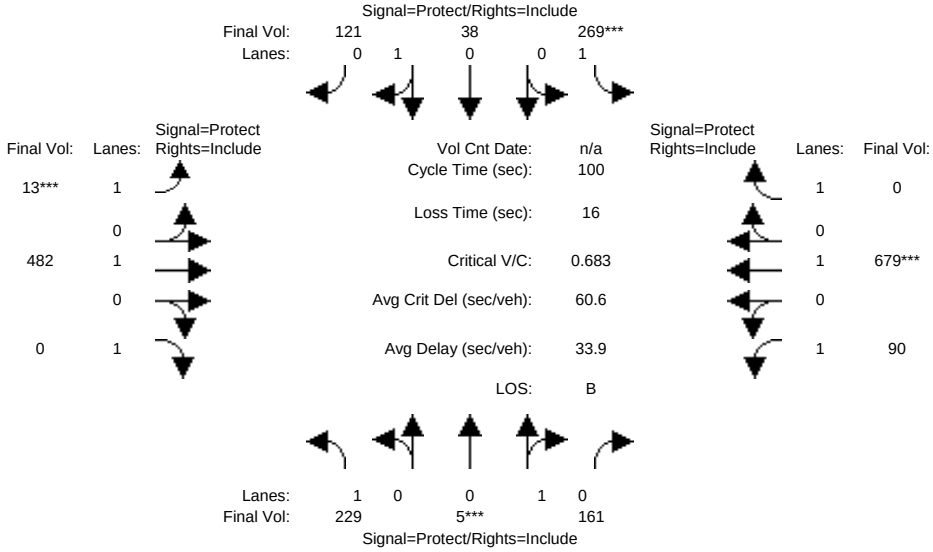
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040+Proj Shc

Intersection #6: Monte Vista H.S. Main and Stone Valeey Rd



Street Name:	Monte Vista H.S. Main Parking Lot						Stone Valley Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	135	3	95	105	15	47	11	400	50	76	570	9
Growth 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
Initial Bse:	135	3	95	105	15	47	11	400	50	76	570	9
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	135	3	95	105	15	47	11	400	50	76	570	9
User 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
PHF Adj:	0.59	0.59	0.59	0.39	0.39	0.39	0.83	0.83	0.83	0.84	0.84	0.84
PHF Volume:	229	5	161	269	38	121	13	482	60	90	679	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	229	5	161	269	38	121	13	482	60	90	679	11
RTOR Reduct:	0	0	0	0	0	0	0	0	60	0	0	11
RTOR Vol:	229	5	161	269	38	121	13	482	0	90	679	0
PCE 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
MLF 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
FinalVolume:	229	5	161	269	38	121	13	482	0	90	679	0
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.03	0.97	1.00	0.24	0.76	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1650	51	1599	1650	399	1251	1650	1650	1650	1650	1650	1650
Capacity Analysis Module:												
Vol/Sat:	0.14	0.10	0.10	0.16	0.10	0.10	0.01	0.29	0.00	0.05	0.41	0.00
Crit Moves:		****		****			****				****	
Green/Cycle:	0.17	0.11	0.11	0.19	0.13	0.13	0.07	0.43	0.00	0.10	0.47	0.00
Volume/Cap:	0.79	0.88	0.88	0.88	0.76	0.76	0.11	0.67	0.00	0.53	0.88	0.00
Delay/Veh:	40.0	225	57.4	46.9	64.0	45.6	33.6	19.1	0.0	35.0	26.3	0.0
Delay 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
AdjDel/Veh:	40.0	225	57.4	46.9	64.0	45.6	33.6	19.1	0.0	35.0	26.3	0.0
DesignQueue:	11	8	8	13	8	8	1	16	0	5	22	0

Note: Queue reported is the number of cars per lane.

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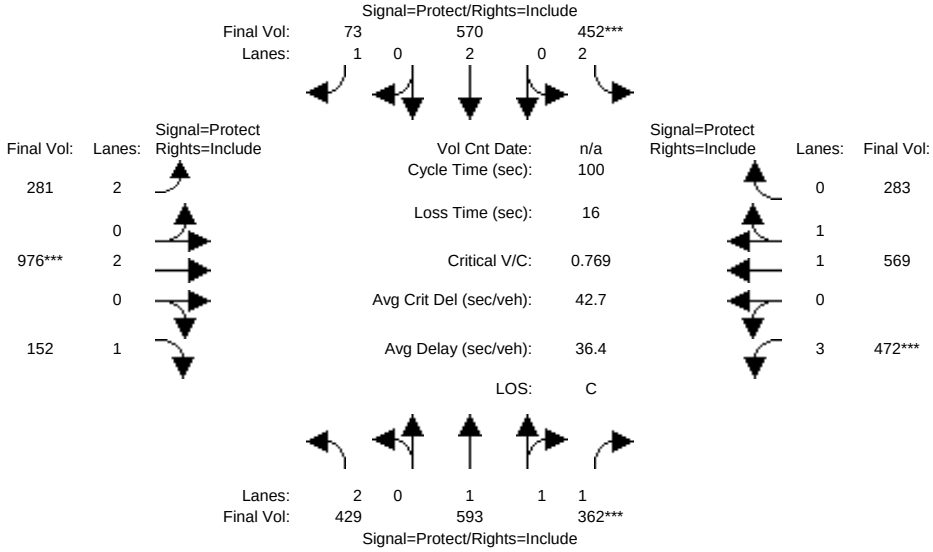
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040+Proj Shc

Intersection #10: Blackhawak Rd/Crow Canyon Rd and Camino Tassajara



Street Name:	Blackhawk Rd/Crow Canyon Rd						Camino Tassajara					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	395	546	500	393	496	198	247	859	342	411	495	246
Growth 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
Initial Bse:	395	546	500	393	496	198	247	859	342	411	495	246
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	395	546	500	393	496	198	247	859	342	411	495	246
User 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
PHF Adj:	0.92	0.92	0.92	0.87	0.87	0.87	0.88	0.88	0.88	0.87	0.87	0.87
PHF Volume:	429	593	543	452	570	228	281	976	389	472	569	283
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	429	593	543	452	570	228	281	976	389	472	569	283
RTOR Reduct:	0	0	181	0	0	154	0	0	236	0	0	0
RTOR Vol:	429	593	362	452	570	73	281	976	152	472	569	283
PCE 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
MLF 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
FinalVolume:	429	593	362	452	570	73	281	976	152	472	569	283
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	0.91	1.00	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.87	1.00	1.00
Lanes:	2.00	1.86	1.14	2.00	2.00	1.00	2.00	2.00	1.00	3.00	1.34	0.66
Final Sat.:	3000	3073	1706	3000	3300	1650	3000	3300	1650	4307	2204	1096
Capacity Analysis Module:												
Vol/Sat:	0.14	0.19	0.21	0.15	0.17	0.04	0.09	0.30	0.09	0.11	0.26	0.26
Crit Moves:			****	****				****		****		
Green/Cycle:	0.18	0.23	0.23	0.16	0.22	0.22	0.12	0.32	0.32	0.12	0.33	0.33
Volume/Cap:	0.80	0.83	0.91	0.91	0.80	0.20	0.79	0.91	0.29	0.91	0.79	0.79
Delay/Veh:	35.9	33.9	47.0	47.1	32.9	24.7	41.1	33.7	19.5	48.5	27.9	31.6
Delay 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
AdjDel/Veh:	35.9	33.9	47.0	47.1	32.9	24.7	41.1	33.7	19.5	48.5	27.9	31.6
DesignQueue:	10	14	14	11	13	3	7	20	6	8	17	17

Note: Queue reported is the number of cars per lane.

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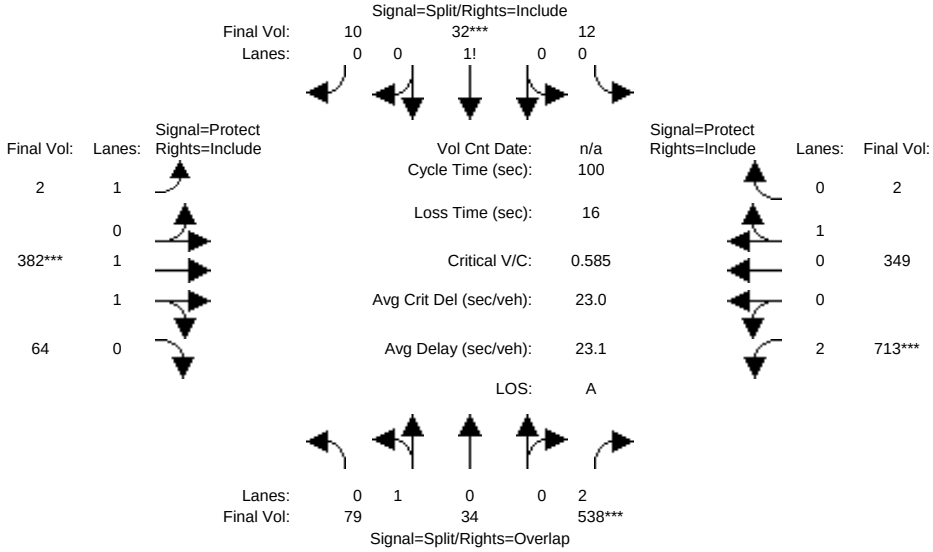
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040+Proj PM

Intersection #1: Daiblo Rd and El Cerro Blvd



Street Name:	Diablo Road						El Cerro Boulevard					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	70	30	828	7	19	6	2	344	58	627	307	2
Growth 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
Initial Bse:	70	30	828	7	19	6	2	344	58	627	307	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	70	30	828	7	19	6	2	344	58	627	307	2
User 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
PHF Adj:	0.89	0.89	0.89	0.60	0.60	0.60	0.90	0.90	0.90	0.88	0.88	0.88
PHF Volume:	79	34	930	12	32	10	2	382	64	713	349	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	79	34	930	12	32	10	2	382	64	713	349	2
RTOR Reduct:	0	0	392	0	0	0	0	0	0	0	0	0
RTOR Vol:	79	34	538	12	32	10	2	382	64	713	349	2
PCE 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
MLF 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
FinalVolume:	79	34	538	12	32	10	2	382	64	713	349	2
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	0.70	0.30	2.00	0.22	0.59	0.19	1.00	1.71	0.29	2.00	0.99	0.01
Final Sat.:	1155	495	3000	361	980	309	1650	2824	476	3000	1639	11
Capacity Analysis Module:												
Vol/Sat:	0.07	0.07	0.18	0.03	0.03	0.03	0.00	0.14	0.14	0.24	0.21	0.21
Crit Moves:			****		****			****		****		
Green/Cycle:	0.24	0.24	0.56	0.10	0.10	0.10	0.12	0.18	0.18	0.32	0.38	0.38
Volume/Cap:	0.28	0.28	0.32	0.32	0.32	0.32	0.01	0.75	0.75	0.75	0.57	0.57
Delay/Veh:	24.0	24.2	9.2	34.0	32.9	34.3	29.6	33.9	48.8	25.7	20.0	81.8
Delay 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
AdjDel/Veh:	24.0	24.2	9.2	34.0	32.9	34.3	29.6	33.9	48.8	25.7	20.0	81.8
DesignQueue:	5	5	7	3	3	3	0	10	10	14	13	13

Note: Queue reported is the number of cars per lane.

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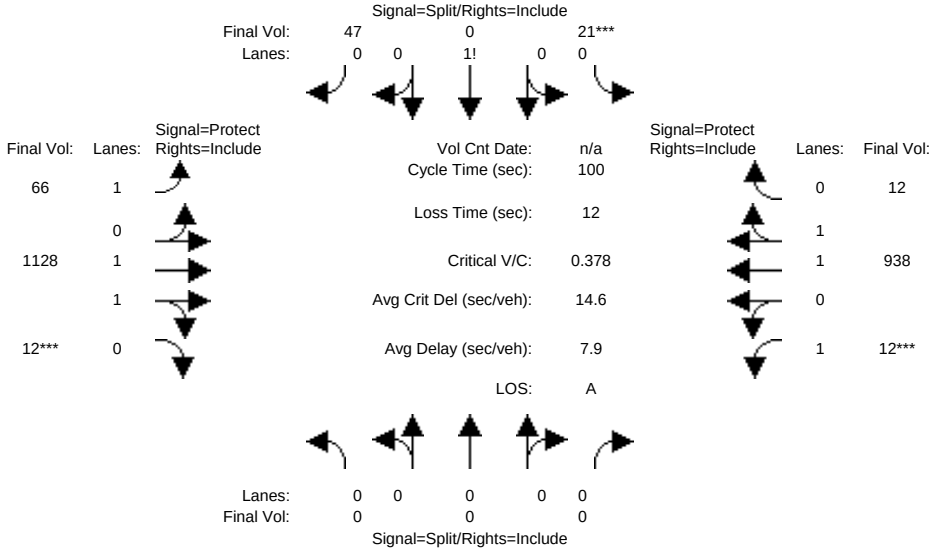
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040+Proj PM

Intersection #2: Matadera Wy and Diablo Rd



Street Name:	Metadera Way						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	17	0	38	59	1015	11	11	854	11
Growth 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
Initial Bse:	0	0	0	17	0	38	59	1015	11	11	854	11
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	17	0	38	59	1015	11	11	854	11
User 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
PHF Adj:	1.00	1.00	1.00	0.81	0.81	0.81	0.90	0.90	0.90	0.91	0.91	0.91
PHF Volume:	0	0	0	21	0	47	66	1128	12	12	938	12
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	21	0	47	66	1128	12	12	938	12
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	21	0	47	66	1128	12	12	938	12
PCE 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
MLF 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
FinalVolume:	0	0	0	21	0	47	66	1128	12	12	938	12
Saturation Flow Module:												
Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.31	0.00	0.69	1.00	1.98	0.02	1.00	1.97	0.03
Final Sat.:	0	0	0	532	0	1188	1720	3403	37	1720	3396	44
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.04	0.04	0.33	0.33	0.01	0.28	0.28
Crit Moves:				****					****	****		
Green/Cycle:	0.00	0.00	0.00	0.10	0.00	0.10	0.16	0.71	0.71	0.07	0.62	0.62
Volume/Cap:	0.00	0.00	0.00	0.39	0.00	0.39	0.24	0.47	0.47	0.10	0.44	0.44
Delay/Veh:	0.0	0.0	0.0	34.9	0.0	33.6	28.5	5.0	13.2	33.5	7.7	14.4
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	34.9	0.0	33.6	28.5	5.0	13.2	33.5	7.7	14.4
DesignQueue:	0	0	0	3	0	3	3	10	10	1	11	11

Note: Queue reported is the number of cars per lane.

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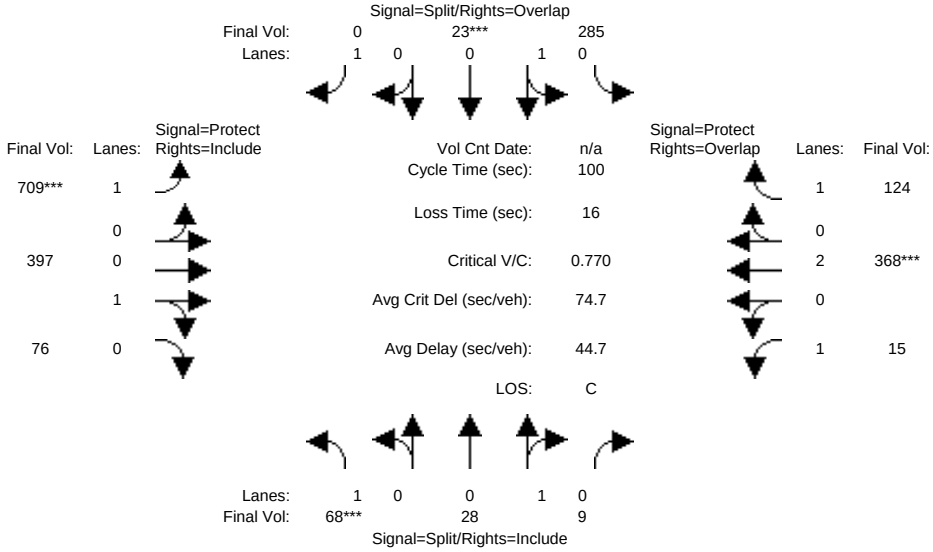
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040+Proj PM

Intersection #3: Green Valley Rd and Diablo Rd



Street Name:	Green Valeey Road						Diablo Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	58	24	8	234	19	450	638	357	68	14	339	377
Growth 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
Initial Bse:	58	24	8	234	19	450	638	357	68	14	339	377
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	58	24	8	234	19	450	638	357	68	14	339	377
User 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
PHF Adj:	0.85	0.85	0.85	0.82	0.82	0.82	0.90	0.90	0.90	0.92	0.92	0.92
PHF Volume:	68	28	9	285	23	549	709	397	76	15	368	410
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	68	28	9	285	23	549	709	397	76	15	368	410
RTOR Reduct:	0	0	0	0	0	549	0	0	0	0	0	285
RTOR Vol:	68	28	9	285	23	0	709	397	76	15	368	124
PCE 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
MLF 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
FinalVolume:	68	28	9	285	23	0	709	397	76	15	368	124
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.75	0.25	0.92	0.08	1.00	1.00	0.84	0.16	1.00	2.00	1.00
Final Sat.:	1650	1238	412	1526	124	1650	1650	1386	264	1650	3300	1650
Capacity Analysis Module:												
Vol/Sat:	0.04	0.02	0.02	0.19	0.19	0.00	0.43	0.29	0.29	0.01	0.11	0.08
Crit Moves:	****				****		****				****	
Green/Cycle:	0.10	0.10	0.10	0.19	0.19	0.00	0.44	0.44	0.44	0.11	0.11	0.30
Volume/Cap:	0.41	0.23	0.23	0.98	0.98	0.00	0.98	0.65	0.65	0.09	0.98	0.25
Delay/Veh:	33.5	32.1	32.4	67.6	166	0.0	43.7	18.5	24.7	30.9	65.9	20.3
Delay 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
AdjDel/Veh:	33.5	32.1	32.4	67.6	166	0.0	43.7	18.5	24.7	30.9	65.9	20.3
DesignQueue:	3	2	2	15	15	0	25	16	16	1	9	5

Note: Queue reported is the number of cars per lane.

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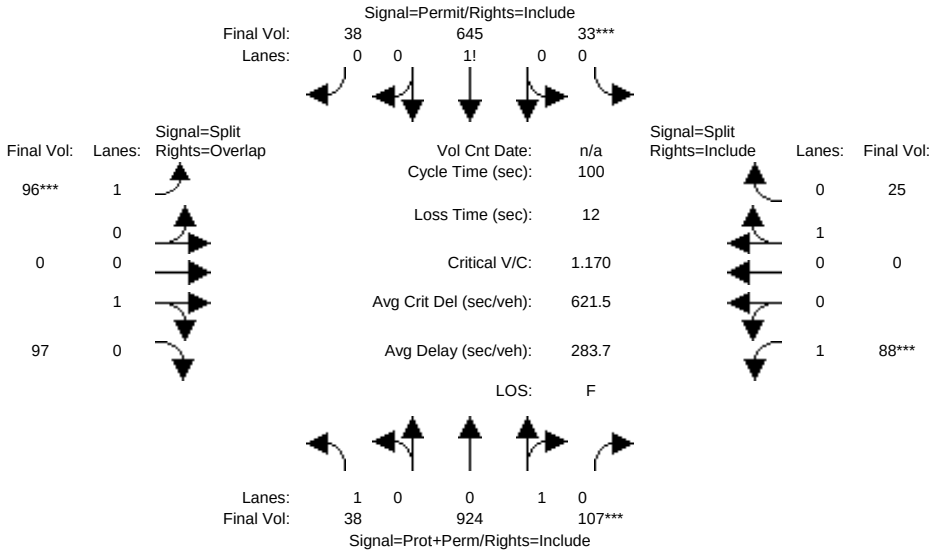
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040+Proj PM

Intersection #4: Green Valley Rd and Blemer Rd/Cameo Dr



Street Name:	Green Valley Road						Blemer Road/Cameo Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	35	841	97	29	568	33	69	0	70	67	0	19
Growth 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
Initial Bse:	35	841	97	29	568	33	69	0	70	67	0	19
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	35	841	97	29	568	33	69	0	70	67	0	19
User 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
PHF Adj:	0.91	0.91	0.91	0.88	0.88	0.88	0.72	0.72	0.72	0.76	0.76	0.76
PHF Volume:	38	924	107	33	645	38	96	0	97	88	0	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	38	924	107	33	645	38	96	0	97	88	0	25
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	38	924	107	33	645	38	96	0	97	88	0	25
PCE 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
MLF 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
FinalVolume:	38	924	107	33	645	38	96	0	97	88	0	25
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.90	0.10	0.05	0.90	0.05	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	1650	1479	171	76	1488	86	1650	0	1650	1650	0	1650
Capacity Analysis Module:												
Vol/Sat:	0.02	0.62	0.62	0.43	0.43	0.43	0.06	0.00	0.06	0.05	0.00	0.02
Crit Moves:			****	****			****			****		
Green/Cycle:	0.09	0.40	0.40	0.28	0.59	0.59	0.10	0.00	0.19	0.10	0.00	0.10
Volume/Cap:	0.25	1.56	1.56	1.56	0.74	0.74	0.58	0.00	0.30	0.53	0.00	0.15
Delay/Veh:	32.5	520	615.2	781.1	14.1	39.3	36.8	0.0	26.7	35.5	0.0	31.7
Delay 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
AdjDel/Veh:	32.5	520	615.2	781.1	14.1	39.3	36.8	0.0	26.7	35.5	0.0	31.7
DesignQueue:	2	40	40	32	18	18	5	0	4	4	0	1

Note: Queue reported is the number of cars per lane.

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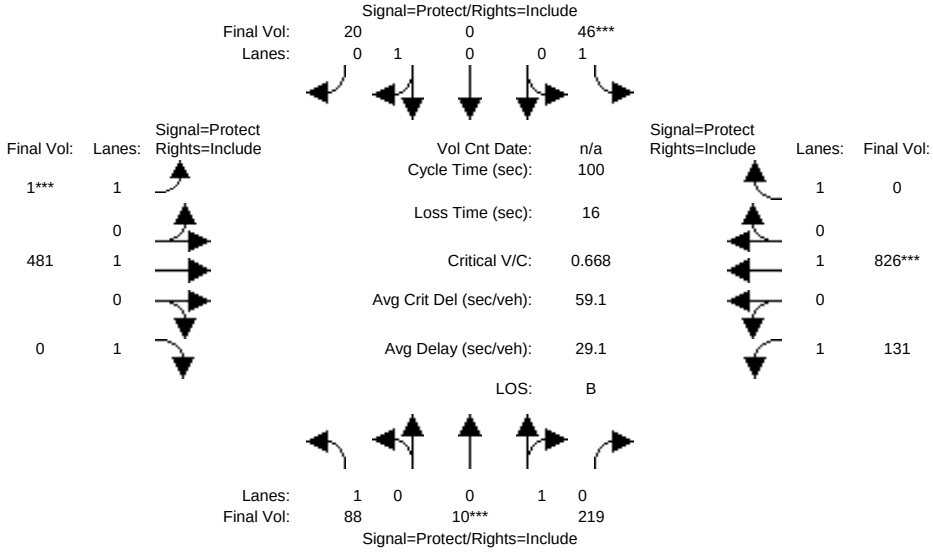
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040+Proj PM

Intersection #6: Monte Vista H.S. Main and Stone Valeey Rd



Street Name:	Monte Vista H.S. Main Parking Lot						Stone Valley Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	52	6	129	19	0	8	1	457	56	123	776	1
Growth 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
Initial Bse:	52	6	129	19	0	8	1	457	56	123	776	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	52	6	129	19	0	8	1	457	56	123	776	1
User 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
PHF Adj:	0.59	0.59	0.59	0.41	0.41	0.41	0.95	0.95	0.95	0.94	0.94	0.94
PHF Volume:	88	10	219	46	0	20	1	481	59	131	826	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	88	10	219	46	0	20	1	481	59	131	826	1
RTOR Reduct:	0	0	0	0	0	0	0	0	59	0	0	1
RTOR Vol:	88	10	219	46	0	20	1	481	0	131	826	0
PCE 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
MLF 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
FinalVolume:	88	10	219	46	0	20	1	481	0	131	826	0
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.04	0.96	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1650	73	1577	1650	0	1650	1650	1650	1650	1650	1650	1650
Capacity Analysis Module:												
Vol/Sat:	0.05	0.14	0.14	0.03	0.00	0.01	0.00	0.29	0.00	0.08	0.50	0.00
Crit Moves:		****		****			****				****	
Green/Cycle:	0.09	0.15	0.15	0.07	0.00	0.07	0.07	0.49	0.00	0.13	0.55	0.00
Volume/Cap:	0.58	0.91	0.91	0.40	0.00	0.17	0.01	0.60	0.00	0.60	0.91	0.00
Delay/Veh:	37.7	185	57.4	35.5	0.0	33.8	33.3	15.3	0.0	34.7	25.4	0.0
Delay 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
AdjDel/Veh:	37.7	185	57.4	35.5	0.0	33.8	33.3	15.3	0.0	34.7	25.4	0.0
DesignQueue:	5	11	11	2	0	1	0	15	0	6	23	0

Note: Queue reported is the number of cars per lane.

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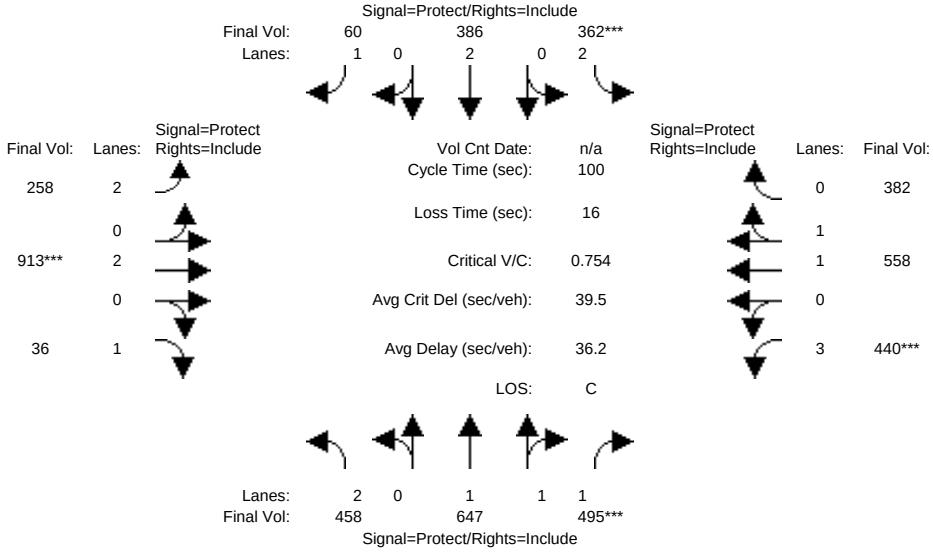
Magee Ranch Residential TIA

Level Of Service Computation Report
CCTALOS (Future Volume Alternative)
2040+Proj PM

Intersection #10: Blackhawak Rd/Crow Canyon Rd and Camino Tassajara



Street Name:	Blackhawk Rd/Crow Canyon Rd						Camino Tassajara					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	417	589	604	355	378	198	230	813	256	387	491	336
Growth 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
Initial Bse:	417	589	604	355	378	198	230	813	256	387	491	336
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	417	589	604	355	378	198	230	813	256	387	491	336
User 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
PHF Adj:	0.91	0.91	0.91	0.98	0.98	0.98	0.89	0.89	0.89	0.88	0.88	0.88
PHF Volume:	458	647	664	362	386	202	258	913	288	440	558	382
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	458	647	664	362	386	202	258	913	288	440	558	382
RTOR Reduct:	0	0	169	0	0	142	0	0	252	0	0	0
RTOR Vol:	458	647	495	362	386	60	258	913	36	440	558	382
PCE 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
MLF 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
FinalVolume:	458	647	495	362	386	60	258	913	36	440	558	382
Saturation Flow Module:												
Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	0.91	1.00	0.91	0.91	1.00	1.00	0.91	1.00	1.00	0.87	1.00	1.00
Lanes:	2.00	1.70	1.30	2.00	2.00	1.00	2.00	2.00	1.00	3.00	1.19	0.81
Final Sat.:	3000	2805	1950	3000	3300	1650	3000	3300	1650	4307	1959	1341
Capacity Analysis Module:												
Vol/Sat:	0.15	0.23	0.25	0.12	0.12	0.04	0.09	0.28	0.02	0.10	0.28	0.28
Crit Moves:			****	****				****		****		
Green/Cycle:	0.24	0.28	0.28	0.13	0.18	0.18	0.10	0.31	0.31	0.11	0.32	0.32
Volume/Cap:	0.65	0.82	0.90	0.90	0.65	0.20	0.88	0.90	0.07	0.90	0.88	0.88
Delay/Veh:	27.9	30.4	38.9	48.4	30.9	26.8	51.4	33.0	18.8	47.2	34.0	37.3
Delay 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
AdjDel/Veh:	27.9	30.4	38.9	48.4	30.9	26.8	51.4	33.0	18.8	47.2	34.0	37.3
DesignQueue:	10	16	16	9	9	3	7	19	1	7	19	19

Note: Queue reported is the number of cars per lane.

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Cumulative plus Project Conditions - AM Peak Period

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	516	59	563	480	3	100	16	685	4	35	3
Future Volume (veh/h)	9	516	59	563	480	3	100	16	685	4	35	3
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.98	1.00		0.97	1.00		0.95
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	11	629	72	633	539	3	128	21	878	6	50	4
Adj No. of Lanes	1	2	0	2	1	0	0	1	2	0	1	0
Peak Hour Factor	0.82	0.82	0.82	0.89	0.89	0.89	0.78	0.78	0.78	0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	15	827	95	501	732	4	476	78	1248	10	80	6
Arrive On Green	0.01	0.26	0.26	0.15	0.40	0.40	0.31	0.31	0.31	0.05	0.05	0.05
Sat Flow, veh/h	1774	3201	366	3442	1850	10	1534	252	2714	182	1520	122
Grp Volume(v), veh/h	11	347	354	633	0	542	149	0	878	60	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1798	1721	0	1861	1786	0	1357	1824	0	0
Q Serve(g_s), s	0.4	12.4	12.5	10.0	0.0	17.1	4.3	0.0	17.9	2.2	0.0	0.0
Cycle Q Clear(g_c), s	0.4	12.4	12.5	10.0	0.0	17.1	4.3	0.0	17.9	2.2	0.0	0.0
Prop In Lane	1.00		0.20	1.00		0.01	0.86		1.00	0.10		0.07
Lane Grp Cap(c), veh/h	15	457	465	501	0	736	554	0	1248	96	0	0
V/C Ratio(X)	0.75	0.76	0.76	1.26	0.00	0.74	0.27	0.00	0.70	0.62	0.00	0.00
Avail Cap(c_a), veh/h	142	541	550	501	0	736	624	0	1354	637	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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	34.0	23.5	23.5	29.3	0.0	17.7	17.8	0.0	15.0	31.9	0.0	0.0
Incr Delay (d2), s/veh	24.2	5.9	5.9	133.8	0.0	4.2	0.1	0.0	1.2	6.4	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	0.3	6.8	7.0	14.0	0.0	9.6	2.1	0.0	6.8	1.3	0.0	0.0
LnGrp Delay(d),s/veh	58.2	29.4	29.5	163.2	0.0	21.9	17.9	0.0	16.2	38.3	0.0	0.0
LnGrp LOS	E	C	C	F		C	B		B	D		
Approach Vol, veh/h		712			1175			1027			60	
Approach Delay, s/veh		29.9			98.0			16.5			38.3	
Approach LOS		C			F			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.0	21.8		7.6	4.6	31.2		25.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	10.0	21.0		24.0	5.5	25.5		24.0
Max Q Clear Time (g_c+I1), s	12.0	14.5		4.2	2.4	19.1		19.9
Green Ext Time (p_c), s	0.0	3.3		0.2	0.0	4.6		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	52.3
HCM 2010 LOS	D

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	1032	45	32	866	19	0	0	0	13	15	143
Future Volume (veh/h)	123	1032	45	32	866	19	0	0	0	13	15	143
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98				1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	148	1243	54	37	1007	22				28	33	311
Adj No. of Lanes	1	2	0	1	2	0				0	1	0
Peak Hour Factor	0.83	0.83	0.83	0.86	0.86	0.86				0.46	0.46	0.46
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	187	1620	70	44	1375	30				35	41	385
Arrive On Green	0.11	0.47	0.47	0.02	0.39	0.39				0.29	0.29	0.29
Sat Flow, veh/h	1774	3452	150	1774	3539	77				118	139	1311
Grp Volume(v), veh/h	148	637	660	37	504	525				372	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1832	1774	1770	1847				1568	0	0
Q Serve(g_s), s	4.6	16.8	16.9	1.2	13.7	13.7				12.4	0.0	0.0
Cycle Q Clear(g_c), s	4.6	16.8	16.9	1.2	13.7	13.7				12.4	0.0	0.0
Prop In Lane	1.00		0.08	1.00		0.04				0.08		0.84
Lane Grp Cap(c), veh/h	187	831	860	44	688	718				460	0	0
V/C Ratio(X)	0.79	0.77	0.77	0.84	0.73	0.73				0.81	0.00	0.00
Avail Cap(c_a), veh/h	220	831	860	176	752	785				611	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	24.6	12.4	12.4	27.4	14.8	14.8				18.5	0.0	0.0
Incr Delay (d2), s/veh	12.8	4.6	4.5	14.5	3.8	3.6				4.4	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
%ile BackOfQ(50%),veh/ln	2.9	9.2	9.5	0.7	7.3	7.6				5.9	0.0	0.0
LnGrp Delay(d),s/veh	37.4	17.0	16.9	41.9	18.5	18.4				22.9	0.0	0.0
LnGrp LOS	D	B	B	D	B	B				C		
Approach Vol, veh/h		1445			1066						372	
Approach Delay, s/veh		19.1			19.3						22.9	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	5.4	30.5		20.6	10.0	25.9		
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s	5.6	25.4		22.0	7.0	24.0		
Max Q Clear Time (g_c+I1), s	3.2	18.9		14.4	6.6	15.7		
Green Ext Time (p_c), s	0.0	6.1		1.1	0.0	6.2		

Intersection Summary	
HCM 2010 Ctrl Delay	19.6
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
3: McCauley Rd/Green Valley Rd & Diablo Rd

Timing Plan: AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	583	387	78	70	408	381	121	73	42	201	70	387
Future Volume (veh/h)	583	387	78	70	408	381	121	73	42	201	70	387
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.92	1.00		1.00	1.00		0.92
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	777	516	104	88	510	476	212	128	74	242	84	466
Adj No. of Lanes	1	1	0	1	2	1	1	1	0	0	1	1
Peak Hour Factor	0.75	0.75	0.75	0.80	0.80	0.80	0.57	0.57	0.57	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	767	775	156	110	510	473	240	150	87	222	77	929
Arrive On Green	0.43	0.51	0.51	0.06	0.14	0.14	0.14	0.14	0.14	0.17	0.17	0.17
Sat Flow, veh/h	1774	1505	303	1774	3539	1451	1774	1107	640	1333	463	1464
Grp Volume(v), veh/h	777	0	620	88	510	476	212	0	202	326	0	466
Grp Sat Flow(s),veh/h/ln	1774	0	1809	1774	1770	1451	1774	0	1747	1796	0	1464
Q Serve(g_s), s	57.0	0.0	33.4	6.5	19.0	19.0	15.5	0.0	14.9	22.0	0.0	22.0
Cycle Q Clear(g_c), s	57.0	0.0	33.4	6.5	19.0	19.0	15.5	0.0	14.9	22.0	0.0	22.0
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.37	0.74		1.00
Lane Grp Cap(c), veh/h	767	0	931	110	510	473	240	0	237	300	0	929
V/C Ratio(X)	1.01	0.00	0.67	0.80	1.00	1.01	0.88	0.00	0.85	1.09	0.00	0.50
Avail Cap(c_a), veh/h	767	0	931	175	510	473	283	0	278	300	0	929
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.4	0.0	23.6	61.1	56.4	37.9	56.0	0.0	55.7	54.9	0.0	15.5
Incr Delay (d2), s/veh	35.8	0.0	1.9	5.4	39.9	42.8	21.5	0.0	17.4	77.5	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	35.3	0.0	17.2	3.3	12.0	22.7	9.0	0.0	8.3	17.3	0.0	10.0
LnGrp Delay(d),s/veh	73.3	0.0	25.6	66.5	96.3	80.7	77.5	0.0	73.1	132.4	0.0	16.1
LnGrp LOS	F		C	E	F	F	E		E	F		B
Approach Vol, veh/h		1397			1074			414			792	
Approach Delay, s/veh		52.1			86.9			75.3			64.0	
Approach LOS		D			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.2	71.8		26.0	61.0	23.0		21.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	13.0	63.0		22.0	57.0	19.0		21.0
Max Q Clear Time (g_c+I1), s	8.5	35.4		24.0	59.0	21.0		17.5
Green Ext Time (p_c), s	0.0	13.7		0.0	0.0	0.0		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	67.5
HCM 2010 LOS	E

Notes

User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	86	77	213	879	547	116
Future Volume (vph)	86	77	213	879	547	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.99	
Flpb, ped/bikes	0.88	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1557	1583	1770	1863	1808	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1557	1583	1770	1863	1808	
Peak-hour factor, PHF	0.46	0.46	0.76	0.76	0.75	0.75
Adj. Flow (vph)	187	167	280	1157	729	155
RTOR Reduction (vph)	0	129	0	0	5	0
Lane Group Flow (vph)	187	38	280	1157	879	0
Confl. Peds. (#/hr)	28					3
Confl. Bikes (#/hr)						3
Turn Type	Perm	pm+ov	Prot	NA	NA	
Protected Phases		5	5	2	6	
Permitted Phases	4	4				
Actuated Green, G (s)	17.0	33.0	16.0	102.6	82.6	
Effective Green, g (s)	17.0	33.0	16.0	102.6	82.6	
Actuated g/C Ratio	0.12	0.23	0.11	0.70	0.57	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	1.8	1.8	1.8	3.0	3.0	
Lane Grp Cap (vph)	181	401	193	1309	1022	
v/s Ratio Prot		0.01	c0.16	c0.62	0.49	
v/s Ratio Perm	c0.12	0.01				
v/c Ratio	1.03	0.09	1.45	0.88	0.86	
Uniform Delay, d1	64.5	44.7	65.0	17.0	26.8	
Progression Factor	1.00	1.00	1.00	1.00	0.52	
Incremental Delay, d2	75.9	0.0	229.4	7.4	0.7	
Delay (s)	140.4	44.7	294.4	24.4	14.6	
Level of Service	F	D	F	C	B	
Approach Delay (s)	95.2			77.0	14.6	
Approach LOS	F			E	B	

Intersection Summary			
HCM 2000 Control Delay	58.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	146.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	108	38	936	29	9	555
Future Volume (vph)	108	38	936	29	9	555
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	1.00			1.00
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1762	1583	1854			1861
Flt Permitted	0.95	1.00	1.00			0.56
Satd. Flow (perm)	1762	1583	1854			1043
Peak-hour factor, PHF	0.85	0.85	0.76	0.76	0.75	0.75
Adj. Flow (vph)	127	45	1232	38	12	740
RTOR Reduction (vph)	0	28	1	0	0	0
Lane Group Flow (vph)	127	17	1269	0	0	752
Confl. Peds. (#/hr)	1			2	2	
Confl. Bikes (#/hr)				1		
Turn Type	Perm	Perm	NA		Perm	NA
Protected Phases			2			6
Permitted Phases	3	3			6	
Actuated Green, G (s)	14.4	14.4	102.6			82.6
Effective Green, g (s)	14.4	14.4	102.6			82.6
Actuated g/C Ratio	0.10	0.10	0.70			0.57
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	2.1	2.1	3.0			3.0
Lane Grp Cap (vph)	173	156	1302			590
v/s Ratio Prot			c0.68			
v/s Ratio Perm	c0.07	0.01				c0.72
v/c Ratio	0.73	0.11	0.97			1.27
Uniform Delay, d1	63.9	60.0	20.5			31.7
Progression Factor	1.00	1.00	0.49			1.00
Incremental Delay, d2	13.2	0.1	10.7			136.4
Delay (s)	77.1	60.1	20.7			168.1
Level of Service	E	E	C			F
Approach Delay (s)	72.7		20.7			168.1
Approach LOS	E		C			F

Intersection Summary			
HCM 2000 Control Delay	75.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	146.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	237.5
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	25	53	432	0	82	107	1	0	934	13	31
Future Vol, veh/h	0	25	53	432	0	82	107	1	0	934	13	31
Peak Hour Factor	0.92	0.60	0.60	0.60	0.92	0.98	0.98	0.98	0.92	0.69	0.69	0.69
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	42	88	720	0	84	109	1	0	1354	19	45
Number of Lanes	0	1	1	1	0	1	2	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	3
HCM Control Delay	231.9	16.5	281.8
HCM LOS	F	C	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	97%	0%	100%	0%	0%	100%	0%	0%	11%	0%
Vol Thru, %	0%	3%	0%	0%	100%	0%	0%	100%	97%	89%	0%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	3%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	476	471	31	25	53	432	82	71	37	28	28
LT Vol	476	458	0	25	0	0	82	0	0	3	0
Through Vol	0	13	0	0	53	0	0	71	36	25	0
RT Vol	0	0	31	0	0	432	0	0	1	0	28
Lane Flow Rate	690	682	45	42	88	720	84	73	37	34	34
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	1.579	1.558	0.088	0.102	0.205	1.531	0.232	0.192	0.098	0.096	0.089
Departure Headway (Hd)	9.089	9.076	7.88	9.346	8.84	8.131	11.428	10.917	10.897	11.454	10.701
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	407	409	457	386	409	454	316	331	331	315	337
Service Time	6.789	6.776	5.58	7.046	6.54	5.831	9.128	8.617	8.597	9.154	8.401
HCM Lane V/C Ratio	1.695	1.667	0.098	0.109	0.215	1.586	0.266	0.221	0.112	0.108	0.101
HCM Control Delay	295.1	286.1	11.3	13.1	13.8	271.3	17.5	16.2	14.8	15.4	14.4
HCM Lane LOS	F	F	B	B	B	F	C	C	B	C	B
HCM 95th-tile Q	35.3	34.4	0.3	0.3	0.8	36.4	0.9	0.7	0.3	0.3	0.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↑	↱
Traffic Vol, veh/h	0	3	25	28
Future Vol, veh/h	0	3	25	28
Peak Hour Factor	0.92	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	4	30	34
Number of Lanes	0	0	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	14.9
HCM LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	304	125	215	534	167	93	4	11	4	1	0
Future Volume (veh/h)	55	304	125	215	534	167	93	4	11	4	1	0
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.68	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	72	400	164	291	722	226	148	6	17	11	3	0
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.76	0.76	0.76	0.74	0.74	0.74	0.63	0.63	0.63	0.38	0.38	0.38
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	86	584	481	329	839	708	185	92	261	14	367	0
Arrive On Green	0.05	0.31	0.31	0.19	0.45	0.45	0.10	0.29	0.29	0.01	0.20	0.00
Sat Flow, veh/h	1774	1863	1535	1774	1863	1571	1774	314	890	1774	1863	0
Grp Volume(v), veh/h	72	400	164	291	722	226	148	0	23	11	3	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1535	1774	1863	1571	1774	0	1204	1774	1863	0
Q Serve(g_s), s	3.3	15.5	6.8	13.2	28.7	7.6	6.7	0.0	1.1	0.5	0.1	0.0
Cycle Q Clear(g_c), s	3.3	15.5	6.8	13.2	28.7	7.6	6.7	0.0	1.1	0.5	0.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.74	1.00		0.00
Lane Grp Cap(c), veh/h	86	584	481	329	839	708	185	0	353	14	367	0
V/C Ratio(X)	0.84	0.69	0.34	0.88	0.86	0.32	0.80	0.00	0.07	0.77	0.01	0.00
Avail Cap(c_a), veh/h	86	584	481	387	891	751	322	0	394	64	367	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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	39.0	24.8	21.8	32.8	20.4	14.6	36.1	0.0	21.0	40.9	26.7	0.0
Incr Delay (d2), s/veh	46.5	3.7	0.6	17.1	8.6	0.4	7.7	0.0	0.1	26.3	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	2.7	8.6	2.9	8.0	16.6	3.4	3.7	0.0	0.4	0.4	0.1	0.0
LnGrp Delay(d),s/veh	85.4	28.5	22.4	49.9	28.9	14.9	43.8	0.0	21.1	67.1	26.7	0.0
LnGrp LOS	F	C	C	D	C	B	D		C	E	C	
Approach Vol, veh/h		636			1239			171			14	
Approach Delay, s/veh		33.4			31.3			40.8			58.5	
Approach LOS		C			C			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.3	30.4	4.7	28.2	8.0	41.7	12.6	20.3
Change Period (Y+Rc), s	4.0	4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	18.0	25.5	3.0	27.0	4.0	39.5	15.0	15.0
Max Q Clear Time (g_c+I1), s	15.2	17.5	2.5	3.1	5.3	30.7	8.7	2.1
Green Ext Time (p_c), s	0.1	6.2	0.0	0.1	0.0	6.5	0.2	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	32.9
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	128
Intersection LOS	F

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Lane Configurations									
Traffic Vol, veh/h	0	280	357	0	535	243	0	122	120
Future Vol, veh/h	0	280	357	0	535	243	0	122	120
Peak Hour Factor	0.92	0.86	0.86	0.92	0.93	0.93	0.92	0.52	0.52
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	326	415	0	575	261	0	235	231
Number of Lanes	0	1	1	0	1	0	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	31.3	274.4	18.8
HCM LOS	D	F	C

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	69%	0%	0%
Vol Right, %	0%	0%	31%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	280	357	778	122	120
LT Vol	280	0	0	122	0
Through Vol	0	357	535	0	0
RT Vol	0	0	243	0	120
Lane Flow Rate	326	415	837	235	231
Geometry Grp	7	7	4	7	7
Degree of Util (X)	0.677	0.806	1.549	0.531	0.446
Departure Headway (Hd)	8.176	7.658	6.668	8.889	7.639
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	446	477	552	408	475
Service Time	5.876	5.358	4.695	6.589	5.339
HCM Lane V/C Ratio	0.731	0.87	1.516	0.576	0.486
HCM Control Delay	26.4	35.1	274.4	21.2	16.3
HCM Lane LOS	D	E	F	C	C
HCM 95th-tile Q	4.9	7.5	44	3	2.3

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	26	591	22	106	40	0	0	29	57
Future Vol, veh/h	0	0	0	26	591	22	106	40	0	0	29	57
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	84	84	84	91	91	91	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	31	704	26	116	44	0	0	37	72

Major/Minor	Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	833	793	-	-	780	718
Stage 1	-	-	-	0	0	-	-	780	-
Stage 2	-	-	-	833	793	-	-	0	-
Critical Hdwy	4.12	-	-	7.12	6.52	-	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-	-	-	-
Follow-up Hdwy	2.218	-	-	3.518	4.018	-	-	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	288	321	0	0	327	429
Stage 1	-	-	-	-	-	0	0	406	-
Stage 2	-	-	-	363	400	0	0	-	-
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	219	321	-	-	327	429
Mov Cap-2 Maneuver	-	-	-	219	321	-	-	327	-
Stage 1	-	-	-	-	-	-	-	406	-
Stage 2	-	-	-	275	400	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		33	17.9
HCM LOS		D	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	219	321	-	-	-	388
HCM Lane V/C Ratio	0.532	0.137	-	-	-	0.281
HCM Control Delay (s)	38.7	18	-	-	-	17.9
HCM Lane LOS	E	C	-	-	-	C
HCM 95th %tile Q(veh)	2.8	0.5	-	-	-	1.1

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	359	31	0	0	0	0	119	41	28	27	0
Future Vol, veh/h	27	359	31	0	0	0	0	119	41	28	27	0
Conflicting Peds, #/hr	1	0	0	0	0	0	0	0	4	4	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	85	-	100	0	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	92	92	92	91	91	91	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	399	34	0	0	0	0	131	45	35	34	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	1	0	0	-	477	420	546	494	-
Stage 1	-	-	-	-	476	-	1	1	-
Stage 2	-	-	-	-	1	-	545	493	-
Critical Hdwy	4.12	-	-	-	6.52	6.22	7.12	6.52	-
Critical Hdwy Stg 1	-	-	-	-	5.52	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	-	4.018	3.318	3.518	4.018	-
Pot Cap-1 Maneuver	1622	-	-	0	487	633	448	476	0
Stage 1	-	-	-	0	557	-	-	-	0
Stage 2	-	-	-	0	-	-	523	547	0
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	1622	-	-	-	475	633	322	464	-
Mov Cap-2 Maneuver	-	-	-	-	475	-	322	464	-
Stage 1	-	-	-	-	544	-	-	-	-
Stage 2	-	-	-	-	-	-	360	534	-

Approach	EB	NB	SB
HCM Control Delay, s	0.5	13.1	15.5
HCM LOS		B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	SBLn1	SBLn2
Capacity (veh/h)	475	475	633	1622	-	-	322	464
HCM Lane V/C Ratio	0.138	0.138	0.071	0.018	-	-	0.11	0.074
HCM Control Delay (s)	13.8	13.8	11.1	7.3	0	-	17.6	13.4
HCM Lane LOS	B	B	B	A	A	-	C	B
HCM 95th %tile Q(veh)	0.5	0.5	0.2	0.1	-	-	0.4	0.2

Intersection	
Intersection Delay, s/veh	99.3
Intersection LOS	F

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations									
Traffic Vol, veh/h	0	315	216	0	415	142	0	96	374
Future Vol, veh/h	0	315	216	0	415	142	0	96	374
Peak Hour Factor	0.92	0.84	0.84	0.92	0.72	0.72	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	375	257	0	576	197	0	105	411
Number of Lanes	0	1	1	0	1	2	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	47.6	164.9	64.3
HCM LOS	E	F	F

Lane	NBLn1	NBLn2	NBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	415	71	71	315	216	96	374
LT Vol	0	0	0	315	0	96	0
Through Vol	415	0	0	0	0	0	374
RT Vol	0	71	71	0	216	0	0
Lane Flow Rate	576	99	99	375	257	105	411
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	1.398	0.219	0.17	0.944	0.562	0.271	0.997
Departure Headway (Hd)	8.732	8.007	6.21	9.741	8.498	9.982	9.458
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	421	449	578	375	427	362	386
Service Time	6.473	5.748	3.951	7.441	6.198	7.682	7.158
HCM Lane V/C Ratio	1.368	0.22	0.171	1	0.602	0.29	1.065
HCM Control Delay	217.4	13	10.2	65.4	21.6	16.4	76.6
HCM Lane LOS	F	B	B	F	C	C	F
HCM 95th-tile Q	28.1	0.8	0.6	10.2	3.4	1.1	11.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	362	269	718	865	227	394	325	282	217	338	214
Future Volume (vph)	160	362	269	718	865	227	394	325	282	217	338	214
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Lane Util. Factor	0.97	0.95	1.00	0.94	0.95		0.97	0.91	0.91	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.97	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1551	4990	3417		3433	3262	1417	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1551	4990	3417		3433	3262	1417	3433	3539	1583
Peak-hour factor, PHF	0.78	0.78	0.78	0.84	0.84	0.84	0.94	0.94	0.94	0.88	0.88	0.88
Adj. Flow (vph)	205	464	345	855	1030	270	419	346	300	247	384	243
RTOR Reduction (vph)	0	0	215	0	17	0	0	21	153	0	0	139
Lane Group Flow (vph)	205	464	130	855	1283	0	419	427	45	247	384	104
Confl. Peds. (#/hr)			7			3			5			
Confl. Bikes (#/hr)			2			3						
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	9.3	25.6	25.6	35.2	51.5		16.8	27.1	27.1	11.7	21.6	21.6
Effective Green, g (s)	9.3	25.6	25.6	35.2	51.5		16.8	27.1	27.1	11.7	21.6	21.6
Actuated g/C Ratio	0.08	0.21	0.21	0.29	0.43		0.14	0.23	0.23	0.10	0.18	0.18
Clearance Time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	266	754	330	1463	1466		480	736	320	334	637	284
v/s Ratio Prot	c0.06	0.13		0.17	c0.38		c0.12	c0.13		0.07	0.11	
v/s Ratio Perm			0.08						0.03			0.07
v/c Ratio	0.77	0.62	0.39	0.58	0.88		0.87	0.58	0.14	0.74	0.60	0.36
Uniform Delay, d1	54.3	42.7	40.5	36.2	31.3		50.6	41.4	37.1	52.7	45.3	43.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.8	1.7	1.1	0.4	6.3		15.5	1.4	0.3	7.2	1.9	1.1
Delay (s)	66.1	44.5	41.6	36.5	37.7		66.1	42.8	37.4	59.9	47.1	44.3
Level of Service	E	D	D	D	D		E	D	D	E	D	D
Approach Delay (s)		47.9			37.2			50.9			49.9	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	44.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.8
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	459	20	11	743	40	22
Future Vol, veh/h	459	20	11	743	40	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	75	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	499	22	12	808	43	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	499	0	1331	499
Stage 1	-	-	-	-	499	-
Stage 2	-	-	-	-	832	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1065	-	170	572
Stage 1	-	-	-	-	610	-
Stage 2	-	-	-	-	427	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1065	-	168	572
Mov Cap-2 Maneuver	-	-	-	-	168	-
Stage 1	-	-	-	-	610	-
Stage 2	-	-	-	-	422	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	25.9
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	168	572	-	-	1065	-
HCM Lane V/C Ratio	0.259	0.042	-	-	0.011	-
HCM Control Delay (s)	33.8	11.6	-	-	8.4	-
HCM Lane LOS	D	B	-	-	A	-
HCM 95th %tile Q(veh)	1	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	233	0	2	216
Future Vol, veh/h	0	3	233	0	2	216
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	3	253	0	2	235

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	492	253	0	0	253	0
Stage 1	253	-	-	-	-	-
Stage 2	239	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	536	786	-	-	1312	-
Stage 1	789	-	-	-	-	-
Stage 2	801	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	535	786	-	-	1312	-
Mov Cap-2 Maneuver	535	-	-	-	-	-
Stage 1	789	-	-	-	-	-
Stage 2	799	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	786	1312	-
HCM Lane V/C Ratio	-	-	0.004	0.002	-
HCM Control Delay (s)	-	-	9.6	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Cumulative plus Project Conditions - School PM Peak Period

HCM 2010 Signalized Intersection Summary
1: Diablo Rd & El Cerro Blvd & Ackerman Dr

Timing Plan: School PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	400	45	633	455	7	102	31	664	2	23	5
Future Volume (veh/h)	7	400	45	633	455	7	102	31	664	2	23	5
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.97	1.00		0.97	1.00		0.93
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	8	435	49	688	495	8	111	34	722	3	31	7
Adj No. of Lanes	1	2	0	2	1	0	0	1	2	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	11	760	85	804	848	14	343	105	1326	5	56	13
Arrive On Green	0.01	0.24	0.24	0.23	0.46	0.46	0.25	0.25	0.25	0.04	0.04	0.04
Sat Flow, veh/h	1774	3209	360	3442	1827	30	1373	421	2705	130	1342	303
Grp Volume(v), veh/h	8	239	245	688	0	503	145	0	722	41	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1799	1721	0	1857	1794	0	1352	1775	0	0
Q Serve(g_s), s	0.3	8.0	8.1	12.8	0.0	13.4	4.4	0.0	12.6	1.5	0.0	0.0
Cycle Q Clear(g_c), s	0.3	8.0	8.1	12.8	0.0	13.4	4.4	0.0	12.6	1.5	0.0	0.0
Prop In Lane	1.00		0.20	1.00		0.02	0.77		1.00	0.07		0.17
Lane Grp Cap(c), veh/h	11	419	426	804	0	862	448	0	1326	73	0	0
V/C Ratio(X)	0.73	0.57	0.58	0.86	0.00	0.58	0.32	0.00	0.54	0.56	0.00	0.00
Avail Cap(c_a), veh/h	146	554	564	1027	0	983	642	0	1619	635	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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	33.3	22.6	22.6	24.6	0.0	13.2	20.5	0.0	12.2	31.5	0.0	0.0
Incr Delay (d2), s/veh	28.5	1.7	1.7	4.9	0.0	0.9	0.2	0.0	0.1	6.5	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	0.2	4.1	4.2	6.6	0.0	7.1	2.2	0.0	4.7	0.9	0.0	0.0
LnGrp Delay(d),s/veh	61.7	24.3	24.4	29.5	0.0	14.1	20.7	0.0	12.3	38.0	0.0	0.0
LnGrp LOS	E	C	C	C		B	C		B	D		
Approach Vol, veh/h		492			1191			867			41	
Approach Delay, s/veh		24.9			23.0			13.7			38.0	
Approach LOS		C			C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.7	19.9		6.8	4.4	35.1		20.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	20.0	21.0		24.0	5.5	35.5		24.0
Max Q Clear Time (g_c+I1), s	14.8	10.1		3.5	2.3	15.4		14.6
Green Ext Time (p_c), s	0.8	5.8		0.1	0.0	8.5		1.8

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	937	9	16	927	22	0	0	0	23	4	133
Future Volume (veh/h)	85	937	9	16	927	22	0	0	0	23	4	133
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97				1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	89	976	9	18	1019	24				45	8	261
Adj No. of Lanes	1	2	0	1	2	0				0	1	0
Peak Hour Factor	0.96	0.96	0.96	0.91	0.91	0.91				0.51	0.51	0.51
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	112	1619	15	24	1415	33				63	11	365
Arrive On Green	0.06	0.45	0.45	0.01	0.40	0.40				0.28	0.28	0.28
Sat Flow, veh/h	1774	3593	33	1774	3532	83				223	40	1294
Grp Volume(v), veh/h	89	481	504	18	511	532				314	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1856	1774	1770	1846				1557	0	0
Q Serve(g_s), s	2.3	9.7	9.7	0.5	11.5	11.5				8.6	0.0	0.0
Cycle Q Clear(g_c), s	2.3	9.7	9.7	0.5	11.5	11.5				8.6	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.05				0.14		0.83
Lane Grp Cap(c), veh/h	112	797	836	24	709	739				439	0	0
V/C Ratio(X)	0.79	0.60	0.60	0.76	0.72	0.72				0.72	0.00	0.00
Avail Cap(c_a), veh/h	210	797	836	207	764	797				725	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	21.8	9.8	9.8	23.2	11.9	11.9				15.3	0.0	0.0
Incr Delay (d2), s/veh	4.6	1.5	1.5	16.7	3.4	3.3				0.8	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
%ile BackOfQ(50%),veh/ln	1.3	5.0	5.2	0.3	6.2	6.4				3.8	0.0	0.0
LnGrp Delay(d),s/veh	26.4	11.3	11.2	39.9	15.4	15.2				16.1	0.0	0.0
LnGrp LOS	C	B	B	D	B	B				B		
Approach Vol, veh/h		1074			1061						314	
Approach Delay, s/veh		12.5			15.7						16.1	
Approach LOS		B			B						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	4.6	25.3		17.3	7.0	22.9		
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s	5.5	20.5		22.0	5.6	20.4		
Max Q Clear Time (g_c+I1), s	2.5	11.7		10.6	4.3	13.5		
Green Ext Time (p_c), s	0.0	7.7		1.1	0.0	5.4		

Intersection Summary	
HCM 2010 Ctrl Delay	14.4
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
3: McCauley Rd/Green Valley Rd & Diablo Rd

Timing Plan: School PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	472	454	91	16	461	280	72	40	31	410	37	422
Future Volume (veh/h)	472	454	91	16	461	280	72	40	31	410	37	422
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.95	1.00		1.00	1.00		0.97
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	482	463	93	17	496	301	138	77	60	500	45	515
Adj No. of Lanes	1	1	0	1	2	1	1	1	0	0	1	1
Peak Hour Factor	0.98	0.98	0.98	0.93	0.93	0.93	0.52	0.52	0.52	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	508	661	133	20	579	735	178	97	76	504	45	927
Arrive On Green	0.29	0.44	0.44	0.01	0.16	0.16	0.10	0.10	0.10	0.31	0.31	0.31
Sat Flow, veh/h	1774	1506	303	1774	3539	1506	1774	970	755	1634	147	1534
Grp Volume(v), veh/h	482	0	556	17	496	301	138	0	137	545	0	515
Grp Sat Flow(s),veh/h/ln	1774	0	1809	1774	1770	1506	1774	0	1725	1781	0	1534
Q Serve(g_s), s	30.2	0.0	28.2	1.1	15.5	15.0	8.6	0.0	8.8	34.6	0.0	23.2
Cycle Q Clear(g_c), s	30.2	0.0	28.2	1.1	15.5	15.0	8.6	0.0	8.8	34.6	0.0	23.2
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.44	0.92		1.00
Lane Grp Cap(c), veh/h	508	0	794	20	579	735	178	0	173	550	0	927
V/C Ratio(X)	0.95	0.00	0.70	0.85	0.86	0.41	0.78	0.00	0.79	0.99	0.00	0.56
Avail Cap(c_a), veh/h	521	0	794	63	615	750	329	0	319	550	0	927
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.6	0.0	25.8	56.0	46.1	19.7	49.8	0.0	49.9	39.1	0.0	14.0
Incr Delay (d2), s/veh	26.9	0.0	2.9	28.6	11.3	0.4	2.8	0.0	3.1	36.1	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.5	0.0	14.7	0.7	8.5	9.5	4.4	0.0	4.3	22.5	0.0	10.0
LnGrp Delay(d),s/veh	66.6	0.0	28.7	84.6	57.4	20.2	52.6	0.0	53.0	75.2	0.0	14.9
LnGrp LOS	E		C	F	E	C	D		D	E		B
Approach Vol, veh/h		1038			814			275			1060	
Approach Delay, s/veh		46.3			44.2			52.8			45.9	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.3	53.8		39.0	36.5	22.6		15.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	49.0		35.0	33.3	19.7		21.0
Max Q Clear Time (g_c+I1), s	3.1	30.2		36.6	32.2	17.5		10.8
Green Ext Time (p_c), s	0.0	9.3		0.0	0.3	1.1		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	46.2
HCM 2010 LOS	D

Notes

User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	80	116	51	696	736	75
Future Volume (vph)	80	116	51	696	736	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.95	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1679	1583	1770	1863	1833	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1679	1583	1770	1863	1833	
Peak-hour factor, PHF	0.55	0.55	0.93	0.93	0.79	0.79
Adj. Flow (vph)	145	211	55	748	932	95
RTOR Reduction (vph)	0	186	0	0	3	0
Lane Group Flow (vph)	145	25	55	748	1024	0
Confl. Peds. (#/hr)	16					5
Confl. Bikes (#/hr)						3
Turn Type	Perm	Perm	Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases	4	4				
Actuated Green, G (s)	13.1	13.1	3.0	72.8	65.8	
Effective Green, g (s)	13.1	13.1	3.0	72.8	65.8	
Actuated g/C Ratio	0.12	0.12	0.03	0.67	0.60	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	1.8	1.8	1.8	3.0	3.0	
Lane Grp Cap (vph)	201	189	48	1239	1102	
v/s Ratio Prot			c0.03	0.40	c0.56	
v/s Ratio Perm	c0.09	0.02				
v/c Ratio	0.72	0.13	1.15	0.60	0.93	
Uniform Delay, d1	46.4	43.1	53.2	10.2	19.7	
Progression Factor	1.00	1.00	1.00	1.00	0.45	
Incremental Delay, d2	10.3	0.1	175.7	0.8	8.4	
Delay (s)	56.7	43.2	228.9	11.1	17.3	
Level of Service	E	D	F	B	B	
Approach Delay (s)	48.7			26.0	17.3	
Approach LOS	D			C	B	

Intersection Summary			
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	109.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	97	17	677	99	21	714
Future Volume (vph)	97	17	677	99	21	714
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	1.00			1.00
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	0.97	1.00	1.00			1.00
Frt	1.00	0.85	0.98			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1713	1583	1826			1860
Flt Permitted	0.95	1.00	1.00			0.96
Satd. Flow (perm)	1713	1583	1826			1797
Peak-hour factor, PHF	0.88	0.88	0.93	0.93	0.79	0.79
Adj. Flow (vph)	110	19	728	106	27	904
RTOR Reduction (vph)	0	17	4	0	0	0
Lane Group Flow (vph)	110	2	830	0	0	931
Confl. Peds. (#/hr)	10					
Confl. Bikes (#/hr)				1		
Turn Type	Perm	Perm	NA		Perm	NA
Protected Phases			2			6
Permitted Phases	3	3			6	
Actuated Green, G (s)	11.5	11.5	72.8			65.8
Effective Green, g (s)	11.5	11.5	72.8			65.8
Actuated g/C Ratio	0.11	0.11	0.67			0.60
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	2.1	2.1	3.0			3.0
Lane Grp Cap (vph)	180	166	1215			1080
v/s Ratio Prot			c0.45			
v/s Ratio Perm	c0.06	0.00				c0.52
v/c Ratio	0.61	0.01	0.68			0.86
Uniform Delay, d1	46.8	43.9	11.2			18.0
Progression Factor	1.00	1.00	0.46			1.00
Incremental Delay, d2	4.4	0.0	1.3			7.2
Delay (s)	51.3	43.9	6.4			25.3
Level of Service	D	D	A			C
Approach Delay (s)	50.2		6.4			25.3
Approach LOS	D		A			C

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	109.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	225.1
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	31	100	677	0	65	94	1	0	572	18	92
Future Vol, veh/h	0	31	100	677	0	65	94	1	0	572	18	92
Peak Hour Factor	0.92	0.69	0.69	0.69	0.92	0.88	0.88	0.88	0.92	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	45	145	981	0	74	107	1	0	665	21	107
Number of Lanes	0	1	1	1	0	1	2	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	3
HCM Control Delay	399.5	16.1	36.6
HCM LOS	F	C	E

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	94%	0%	100%	0%	0%	100%	0%	0%	12%	0%
Vol Thru, %	0%	6%	0%	0%	100%	0%	0%	100%	97%	88%	0%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	3%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	297	293	92	31	100	677	65	63	32	16	36
LT Vol	297	275	0	31	0	0	65	0	0	2	0
Through Vol	0	18	0	0	100	0	0	63	31	14	0
RT Vol	0	0	92	0	0	677	0	0	1	0	36
Lane Flow Rate	346	340	107	45	145	981	74	71	37	25	55
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.794	0.778	0.21	0.107	0.324	1.999	0.201	0.184	0.095	0.065	0.136
Departure Headway (Hd)	9.737	9.706	8.527	8.554	8.047	7.335	11.345	10.829	10.806	11.138	10.376
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	374	378	424	417	445	500	318	333	334	324	348
Service Time	7.437	7.406	6.227	6.338	5.83	5.118	9.045	8.529	8.506	8.838	8.076
HCM Lane V/C Ratio	0.925	0.899	0.252	0.108	0.326	1.962	0.233	0.213	0.111	0.077	0.158
HCM Control Delay	41.1	39.2	13.5	12.4	14.7	474.1	16.9	16	14.6	14.6	14.7
HCM Lane LOS	E	E	B	B	B	F	C	C	B	B	B
HCM 95th-tile Q	6.8	6.5	0.8	0.4	1.4	66.1	0.7	0.7	0.3	0.2	0.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↰	↱
Traffic Vol, veh/h	0	2	14	36
Future Vol, veh/h	0	2	14	36
Peak Hour Factor	0.92	0.65	0.65	0.65
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	3	22	55
Number of Lanes	0	0	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	14.7
HCM LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	400	50	76	570	9	135	3	95	105	15	47
Future Volume (veh/h)	11	400	50	76	570	9	135	3	95	105	15	47
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.79	1.00		0.69	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	13	482	60	90	679	11	229	5	161	269	38	121
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.83	0.83	0.83	0.84	0.84	0.84	0.59	0.59	0.59	0.39	0.39	0.39
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	17	578	477	103	669	450	271	10	309	269	112	358
Arrive On Green	0.01	0.31	0.31	0.06	0.36	0.36	0.15	0.29	0.29	0.15	0.29	0.29
Sat Flow, veh/h	1774	1863	1537	1774	1863	1253	1774	33	1074	1774	392	1250
Grp Volume(v), veh/h	13	482	60	90	679	11	229	0	166	269	0	159
Grp Sat Flow(s),veh/h/ln	1774	1863	1537	1774	1863	1253	1774	0	1107	1774	0	1642
Q Serve(g_s), s	0.6	20.7	2.4	4.3	30.8	0.5	10.8	0.0	10.8	13.0	0.0	6.6
Cycle Q Clear(g_c), s	0.6	20.7	2.4	4.3	30.8	0.5	10.8	0.0	10.8	13.0	0.0	6.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.76
Lane Grp Cap(c), veh/h	17	578	477	103	669	450	271	0	318	269	0	470
V/C Ratio(X)	0.79	0.83	0.13	0.87	1.02	0.02	0.85	0.00	0.52	1.00	0.00	0.34
Avail Cap(c_a), veh/h	62	619	511	103	669	450	414	0	349	269	0	470
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.4	27.5	21.2	40.1	27.5	17.8	35.3	0.0	25.6	36.4	0.0	24.2
Incr Delay (d2), s/veh	25.5	9.6	0.2	48.5	38.6	0.0	9.6	0.0	1.3	55.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	12.1	1.0	3.5	22.8	0.2	6.0	0.0	3.4	10.4	0.0	3.0
LnGrp Delay(d),s/veh	67.9	37.2	21.4	88.6	66.1	17.8	44.9	0.0	26.9	91.4	0.0	24.3
LnGrp LOS	E	D	C	F	F	B	D		C	F		C
Approach Vol, veh/h		555			780			395			428	
Approach Delay, s/veh		36.2			68.0			37.4			66.5	
Approach LOS		D			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	31.1	17.0	28.7	4.8	35.3	17.1	28.6
Change Period (Y+Rc), s	4.0	4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	5.0	28.5	13.0	27.0	3.0	30.5	20.0	20.0
Max Q Clear Time (g_c+I1), s	6.3	22.7	15.0	12.8	2.6	32.8	12.8	8.6
Green Ext Time (p_c), s	0.0	3.9	0.0	0.9	0.0	0.0	0.4	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	53.9
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	98.5
Intersection LOS	F

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Lane Configurations									
Traffic Vol, veh/h	0	119	624	0	435	47	0	81	182
Future Vol, veh/h	0	119	624	0	435	47	0	81	182
Peak Hour Factor	0.92	0.86	0.86	0.92	0.90	0.90	0.92	0.73	0.73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	138	726	0	483	52	0	111	249
Number of Lanes	0	1	1	0	1	0	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	159.2	56.2	16
HCM LOS	F	F	C

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	90%	0%	0%
Vol Right, %	0%	0%	10%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	119	624	482	81	182
LT Vol	119	0	0	81	0
Through Vol	0	624	435	0	0
RT Vol	0	0	47	0	182
Lane Flow Rate	138	726	536	111	249
Geometry Grp	7	7	4	7	7
Degree of Util (X)	0.276	1.344	0.961	0.25	0.48
Departure Headway (Hd)	7.182	6.67	6.859	8.662	7.419
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	500	544	536	417	489
Service Time	4.929	4.417	4.859	6.362	5.119
HCM Lane V/C Ratio	0.276	1.335	1	0.266	0.509
HCM Control Delay	12.7	187.1	56.2	14.2	16.8
HCM Lane LOS	B	F	F	B	C
HCM 95th-tile Q	1.1	31.6	12.5	1	2.6

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	34	409	35	40	48	0	0	48	24
Future Vol, veh/h	0	0	0	34	409	35	40	48	0	0	48	24
Conflicting Peds, #/hr	0	0	0	1	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	82	82	82	77	77	77	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	41	499	43	52	62	0	0	67	33

Major/Minor	Major2			Minor1		Minor2			
Conflicting Flow All	1	0	0	654	625	-	-	604	520
Stage 1	-	-	-	1	1	-	-	603	-
Stage 2	-	-	-	653	624	-	-	1	-
Critical Hdwy	4.12	-	-	7.12	6.52	-	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-	-	-	-
Follow-up Hdwy	2.218	-	-	3.518	4.018	-	-	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	380	401	0	0	412	556
Stage 1	-	-	-	-	-	0	0	488	-
Stage 2	-	-	-	456	478	0	0	-	-
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	1622	-	-	303	386	-	-	397	556
Mov Cap-2 Maneuver	-	-	-	303	386	-	-	397	-
Stage 1	-	-	-	-	-	-	-	470	-
Stage 2	-	-	-	355	461	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0.5	17.6	15.6
HCM LOS		C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	303	386	1622	-	-	439
HCM Lane V/C Ratio	0.171	0.161	0.026	-	-	0.228
HCM Control Delay (s)	19.3	16.1	7.3	0	-	15.6
HCM Lane LOS	C	C	A	A	-	C
HCM 95th %tile Q(veh)	0.6	0.6	0.1	-	-	0.9

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	551	71	0	0	0	0	40	45	46	36	0
Future Vol, veh/h	48	551	71	0	0	0	0	40	45	46	36	0
Conflicting Peds, #/hr	0	0	1	0	0	0	0	0	2	2	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	85	-	100	0	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	92	92	92	77	77	77	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	656	85	0	0	0	0	52	58	64	50	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	0	0	0	-	814	701	840	856	-
Stage 1	-	-	-	-	814	-	0	0	-
Stage 2	-	-	-	-	0	-	840	856	-
Critical Hdwy	4.12	-	-	-	6.52	6.22	7.12	6.52	-
Critical Hdwy Stg 1	-	-	-	-	5.52	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	-	4.018	3.318	3.518	4.018	-
Pot Cap-1 Maneuver	-	-	-	0	312	439	285	295	0
Stage 1	-	-	-	0	391	-	-	-	0
Stage 2	-	-	-	0	-	-	360	374	0
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	-	312	439	215	295	-
Mov Cap-2 Maneuver	-	-	-	-	312	-	215	295	-
Stage 1	-	-	-	-	391	-	-	-	-
Stage 2	-	-	-	-	-	-	271	374	-

Approach	EB	NB	SB
HCM Control Delay, s		16	24.7
HCM LOS		C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	SBLn1	SBLn2
Capacity (veh/h)	312	312	439	-	-	-	215	295
HCM Lane V/C Ratio	0.083	0.083	0.133	-	-	-	0.297	0.169
HCM Control Delay (s)	17.6	17.6	14.5	-	-	-	28.7	19.7
HCM Lane LOS	C	C	B	-	-	-	D	C
HCM 95th %tile Q(veh)	0.3	0.3	0.5	-	-	-	1.2	0.6

Intersection	
Intersection Delay, s/veh	121.3
Intersection LOS	F

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations									
Traffic Vol, veh/h	0	308	178	0	388	357	0	142	533
Future Vol, veh/h	0	308	178	0	388	357	0	142	533
Peak Hour Factor	0.92	0.94	0.94	0.92	0.92	0.92	0.92	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	328	189	0	422	388	0	171	642
Number of Lanes	0	1	1	0	1	2	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	41.1	47.2	246
HCM LOS	E	E	F

Lane	NBLn1	NBLn2	NBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	388	179	179	308	178	142	533
LT Vol	0	0	0	308	0	142	0
Through Vol	388	0	0	0	0	0	533
RT Vol	0	179	179	0	178	0	0
Lane Flow Rate	422	194	194	328	189	171	642
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.998	0.421	0.327	0.865	0.437	0.452	1.605
Departure Headway (Hd)	9.407	8.679	6.874	10.55	9.304	9.516	8.996
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	388	417	526	347	390	378	405
Service Time	7.107	6.379	4.574	8.25	7.004	7.267	6.746
HCM Lane V/C Ratio	1.088	0.465	0.369	0.945	0.485	0.452	1.585
HCM Control Delay	76.7	17.5	12.9	53.8	19	19.9	306.2
HCM Lane LOS	F	C	B	F	C	C	F
HCM 95th-tile Q	11.9	2	1.4	8	2.2	2.3	36.6

HCM Signalized Intersection Capacity Analysis
10: Crow Canyon Rd/Blackhawk Rd & Camino Tassajara

Timing Plan: School PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	247	859	342	411	495	246	395	546	500	393	496	198
Future Volume (vph)	247	859	342	411	495	246	395	546	500	393	496	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Lane Util. Factor	0.97	0.95	1.00	0.94	0.95		0.97	0.91	0.91	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.96	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1562	4990	3343		3433	3251	1417	3433	3539	1561
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1562	4990	3343		3433	3251	1417	3433	3539	1561
Peak-hour factor, PHF	0.88	0.88	0.88	0.87	0.87	0.87	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	281	976	389	472	569	283	429	593	543	452	570	228
RTOR Reduction (vph)	0	0	220	0	49	0	0	24	138	0	0	163
Lane Group Flow (vph)	281	976	169	472	803	0	429	764	210	452	570	65
Confl. Peds. (#/hr)						3			5			2
Confl. Bikes (#/hr)			2			3						
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	12.5	38.0	38.0	11.6	37.1		16.5	35.5	35.5	15.7	34.3	34.3
Effective Green, g (s)	12.5	38.0	38.0	11.6	37.1		16.5	35.5	35.5	15.7	34.3	34.3
Actuated g/C Ratio	0.10	0.31	0.31	0.10	0.31		0.14	0.29	0.29	0.13	0.28	0.28
Clearance Time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	354	1109	489	477	1023		467	952	415	444	1001	441
v/s Ratio Prot	0.08	c0.28		c0.09	0.24		0.12	c0.24		c0.13	0.16	
v/s Ratio Perm			0.11						0.15			0.04
v/c Ratio	0.79	0.88	0.34	0.99	0.79		0.92	0.80	0.51	1.02	0.57	0.15
Uniform Delay, d1	53.1	39.4	32.0	54.7	38.4		51.7	39.6	35.6	52.8	37.1	32.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.9	8.6	0.6	38.0	4.3		22.6	5.2	1.3	47.3	0.9	0.2
Delay (s)	64.0	48.0	32.6	92.7	42.7		74.2	44.8	36.9	100.1	38.0	32.7
Level of Service	E	D	C	F	D		E	D	D	F	D	C
Approach Delay (s)		47.1			60.5			51.1			59.5	
Approach LOS		D			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	53.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	121.2	Sum of lost time (s)	20.8
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	674	31	19	454	20	13
Future Vol, veh/h	674	31	19	454	20	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	75	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	733	34	21	493	22	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	733	0	1268	733
Stage 1	-	-	-	-	733	-
Stage 2	-	-	-	-	535	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	872	-	186	421
Stage 1	-	-	-	-	475	-
Stage 2	-	-	-	-	587	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	872	-	182	421
Mov Cap-2 Maneuver	-	-	-	-	182	-
Stage 1	-	-	-	-	475	-
Stage 2	-	-	-	-	573	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	22
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	182	421	-	-	872	-
HCM Lane V/C Ratio	0.119	0.034	-	-	0.024	-
HCM Control Delay (s)	27.4	13.8	-	-	9.2	-
HCM Lane LOS	D	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	141	0	2	142
Future Vol, veh/h	0	2	141	0	2	142
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	153	0	2	154

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	312	153	0	0	153	0
Stage 1	153	-	-	-	-	-
Stage 2	159	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	681	893	-	-	1428	-
Stage 1	875	-	-	-	-	-
Stage 2	870	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	680	893	-	-	1428	-
Mov Cap-2 Maneuver	680	-	-	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	868	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	893	1428	-
HCM Lane V/C Ratio	-	-	0.002	0.002	-
HCM Control Delay (s)	-	-	9	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Cumulative plus Project Conditions - PM Peak Period

HCM 2010 Signalized Intersection Summary
1: Diablo Rd & El Cerro Blvd & Ackerman Dr

Timing Plan: PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	344	58	627	307	2	70	30	828	7	19	6
Future Volume (veh/h)	2	344	58	627	307	2	70	30	828	7	19	6
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.96	1.00		0.94
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	2	391	66	697	341	2	79	34	930	12	32	10
Adj No. of Lanes	1	2	0	2	1	0	0	1	2	0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.90	0.90	0.90	0.89	0.89	0.89	0.60	0.60	0.60
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	3	647	108	792	818	5	371	160	1434	19	51	16
Arrive On Green	0.00	0.21	0.21	0.23	0.44	0.44	0.30	0.30	0.30	0.05	0.05	0.05
Sat Flow, veh/h	1774	3026	506	3442	1850	11	1258	542	2686	392	1044	326
Grp Volume(v), veh/h	2	227	230	697	0	343	113	0	930	54	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1762	1721	0	1860	1800	0	1343	1762	0	0
Q Serve(g_s), s	0.1	8.7	8.9	14.7	0.0	9.5	3.6	0.0	19.0	2.3	0.0	0.0
Cycle Q Clear(g_c), s	0.1	8.7	8.9	14.7	0.0	9.5	3.6	0.0	19.0	2.3	0.0	0.0
Prop In Lane	1.00		0.29	1.00		0.01	0.70		1.00	0.22		0.19
Lane Grp Cap(c), veh/h	3	378	377	792	0	823	531	0	1434	86	0	0
V/C Ratio(X)	0.69	0.60	0.61	0.88	0.00	0.42	0.21	0.00	0.65	0.63	0.00	0.00
Avail Cap(c_a), veh/h	129	493	491	913	0	876	573	0	1496	561	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	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	37.6	26.7	26.8	28.0	0.0	14.4	20.0	0.0	13.0	35.2	0.0	0.0
Incr Delay (d2), s/veh	72.9	2.2	2.3	8.2	0.0	0.5	0.1	0.0	0.7	7.3	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	0.1	4.5	4.6	7.9	0.0	5.0	1.8	0.0	7.1	1.3	0.0	0.0
LnGrp Delay(d),s/veh	110.5	28.9	29.1	36.2	0.0	14.9	20.1	0.0	13.7	42.4	0.0	0.0
LnGrp LOS	F	C	C	D		B	C		B	D		
Approach Vol, veh/h		459			1040			1043			54	
Approach Delay, s/veh		29.3			29.2			14.4			42.4	
Approach LOS		C			C			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	21.3	20.1		7.7	4.1	37.3		26.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	20.0	21.0		24.0	5.5	35.5		24.0
Max Q Clear Time (g_c+I1), s	16.7	10.9		4.3	2.1	11.5		21.0
Green Ext Time (p_c), s	0.6	4.5		0.2	0.0	7.2		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	23.5
HCM 2010 LOS	C

Notes

User approved changes to right turn type.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	1015	11	11	854	11	0	0	0	17	0	38
Future Volume (veh/h)	59	1015	11	11	854	11	0	0	0	17	0	38
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98				1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	66	1128	12	12	938	12				21	0	47
Adj No. of Lanes	1	2	0	1	2	0				0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.91	0.91	0.91				0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	79	2062	22	17	1931	25				33	0	74
Arrive On Green	0.04	0.58	0.58	0.01	0.54	0.54				0.07	0.00	0.07
Sat Flow, veh/h	1774	3586	38	1774	3577	46				493	0	1104
Grp Volume(v), veh/h	66	557	583	12	464	486				68	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1855	1774	1770	1853				1597	0	0
Q Serve(g_s), s	1.3	6.7	6.7	0.2	5.6	5.6				1.4	0.0	0.0
Cycle Q Clear(g_c), s	1.3	6.7	6.7	0.2	5.6	5.6				1.4	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.02				0.31		0.69
Lane Grp Cap(c), veh/h	79	1018	1067	17	955	1000				107	0	0
V/C Ratio(X)	0.83	0.55	0.55	0.72	0.49	0.49				0.63	0.00	0.00
Avail Cap(c_a), veh/h	288	1053	1104	283	1048	1097				1019	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	16.3	4.5	4.5	17.0	4.9	4.9				15.7	0.0	0.0
Incr Delay (d2), s/veh	8.2	0.7	0.7	18.9	0.5	0.5				2.3	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
%ile BackOfQ(50%),veh/ln	0.8	3.3	3.5	0.2	2.9	3.0				0.7	0.0	0.0
LnGrp Delay(d),s/veh	24.6	5.3	5.2	35.9	5.5	5.5				17.9	0.0	0.0
LnGrp LOS	C	A	A	D	A	A				B		
Approach Vol, veh/h		1206			962						68	
Approach Delay, s/veh		6.3			5.9						17.9	
Approach LOS		A			A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		
Phs Duration (G+Y+Rc), s	4.3	23.8		6.3	5.5	22.6		
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		
Max Green Setting (Gmax), s	5.5	20.5		22.0	5.6	20.4		
Max Q Clear Time (g_c+I1), s	2.2	8.7		3.4	3.3	7.6		
Green Ext Time (p_c), s	0.0	10.2		0.2	0.0	11.0		

Intersection Summary	
HCM 2010 Ctrl Delay	6.5
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
3: McCauley Rd/Green Valley Rd & Diablo Rd

Timing Plan: PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	638	357	68	14	339	377	58	24	8	234	19	450
Future Volume (veh/h)	638	357	68	14	339	377	58	24	8	234	19	450
Number	5	2	12	1	6	16	3	8	18	7	4	14
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		0.94	1.00		1.00	1.00		0.99
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	709	397	76	15	368	410	68	28	9	285	23	549
Adj No. of Lanes	1	1	0	1	2	1	1	1	0	0	1	1
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.85	0.85	0.85	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	747	895	171	18	629	575	97	74	24	324	26	976
Arrive On Green	0.42	0.59	0.59	0.01	0.18	0.18	0.05	0.05	0.05	0.20	0.20	0.20
Sat Flow, veh/h	1774	1520	291	1774	3539	1485	1774	1352	434	1647	133	1574
Grp Volume(v), veh/h	709	0	473	15	368	410	68	0	37	308	0	549
Grp Sat Flow(s),veh/h/ln	1774	0	1811	1774	1770	1485	1774	0	1786	1780	0	1574
Q Serve(g_s), s	41.2	0.0	15.5	0.9	10.2	19.0	4.0	0.0	2.1	18.0	0.0	21.0
Cycle Q Clear(g_c), s	41.2	0.0	15.5	0.9	10.2	19.0	4.0	0.0	2.1	18.0	0.0	21.0
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.24	0.93		1.00
Lane Grp Cap(c), veh/h	747	0	1067	18	629	575	97	0	98	350	0	976
V/C Ratio(X)	0.95	0.00	0.44	0.84	0.58	0.71	0.70	0.00	0.38	0.88	0.00	0.56
Avail Cap(c_a), veh/h	797	0	1067	83	629	575	349	0	351	350	0	976
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.8	0.0	12.2	52.8	40.3	26.9	49.6	0.0	48.7	41.7	0.0	12.0
Incr Delay (d2), s/veh	20.2	0.0	0.4	29.7	1.5	4.3	3.3	0.0	0.9	22.3	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.3	0.0	7.9	0.6	5.1	12.6	2.1	0.0	1.1	11.0	0.0	9.7
LnGrp Delay(d),s/veh	50.0	0.0	12.6	82.5	41.9	31.2	53.0	0.0	49.6	64.0	0.0	12.9
LnGrp LOS	D		B	F	D	C	D		D	E		B
Approach Vol, veh/h		1182			793			105			857	
Approach Delay, s/veh		35.1			37.1			51.8			31.3	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.1	66.9		25.0	49.0	23.0		9.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	5.0	62.0		21.0	48.0	19.0		21.0
Max Q Clear Time (g_c+I1), s	2.9	17.5		23.0	43.2	21.0		6.0
Green Ext Time (p_c), s	0.0	11.1		0.0	1.8	0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	35.1
HCM 2010 LOS	D

Notes

User approved changes to right turn type.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	69	70	35	938	635	33
Future Volume (vph)	69	70	35	938	635	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	0.99	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1756	1583	1770	1863	1846	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1756	1583	1770	1863	1846	
Peak-hour factor, PHF	0.72	0.72	0.91	0.91	0.88	0.88
Adj. Flow (vph)	96	97	38	1031	722	38
RTOR Reduction (vph)	0	88	0	0	1	0
Lane Group Flow (vph)	96	9	38	1031	759	0
Confl. Peds. (#/hr)	2					6
Confl. Bikes (#/hr)						3
Turn Type	Perm	Perm	Prot	NA	NA	
Protected Phases			5	2	6	
Permitted Phases	4	4				
Actuated Green, G (s)	11.2	11.2	3.0	93.3	86.3	
Effective Green, g (s)	11.2	11.2	3.0	93.3	86.3	
Actuated g/C Ratio	0.09	0.09	0.02	0.73	0.68	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	1.8	1.8	1.8	3.0	3.0	
Lane Grp Cap (vph)	154	139	41	1365	1251	
v/s Ratio Prot			0.02	c0.55	0.41	
v/s Ratio Perm	c0.05	0.01				
v/c Ratio	0.62	0.06	0.93	0.76	0.61	
Uniform Delay, d1	56.0	53.2	62.0	10.2	11.2	
Progression Factor	1.00	1.00	1.00	1.00	0.47	
Incremental Delay, d2	5.5	0.1	109.8	2.4	0.6	
Delay (s)	61.6	53.3	171.8	12.6	5.9	
Level of Service	E	D	F	B	A	
Approach Delay (s)	57.4			18.3	5.9	
Approach LOS	E			B	A	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	127.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	67	19	910	97	29	601
Future Volume (vph)	67	19	910	97	29	601
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	1.00			1.00
Frpb, ped/bikes	1.00	1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	1.00	0.85	0.99			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1770	1583	1835			1858
Flt Permitted	0.95	1.00	1.00			0.78
Satd. Flow (perm)	1770	1583	1835			1447
Peak-hour factor, PHF	0.76	0.76	0.91	0.91	0.88	0.88
Adj. Flow (vph)	88	25	1000	107	33	683
RTOR Reduction (vph)	0	23	2	0	0	0
Lane Group Flow (vph)	88	2	1105	0	0	716
Confl. Bikes (#/hr)				1		
Turn Type	Perm	Perm	NA		Perm	NA
Protected Phases			2			6
Permitted Phases	3	3			6	
Actuated Green, G (s)	10.8	10.8	93.3			86.3
Effective Green, g (s)	10.8	10.8	93.3			86.3
Actuated g/C Ratio	0.08	0.08	0.73			0.68
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	2.1	2.1	3.0			3.0
Lane Grp Cap (vph)	150	134	1344			980
v/s Ratio Prot			c0.60			
v/s Ratio Perm	c0.05	0.00				0.49
v/c Ratio	0.59	0.02	0.82			0.73
Uniform Delay, d1	56.1	53.4	11.4			13.1
Progression Factor	1.00	1.00	0.36			1.00
Incremental Delay, d2	3.9	0.0	2.8			2.8
Delay (s)	60.0	53.4	6.9			15.9
Level of Service	E	D	A			B
Approach Delay (s)	58.6		6.9			15.9
Approach LOS	E		A			B

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	127.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	90.7
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	18	90	524	0	89	63	3	0	799	18	78
Future Vol, veh/h	0	18	90	524	0	89	63	3	0	799	18	78
Peak Hour Factor	0.92	0.87	0.87	0.87	0.92	0.72	0.72	0.72	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	21	103	602	0	124	88	4	0	868	20	85
Number of Lanes	0	1	1	1	0	1	2	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	3
HCM Control Delay	144.1	16.8	72.2
HCM LOS	F	C	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	96%	0%	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	0%	4%	0%	0%	100%	0%	0%	100%	88%	100%	0%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	12%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	407	410	78	18	90	524	89	42	24	11	27
LT Vol	407	392	0	18	0	0	89	0	0	0	0
Through Vol	0	18	0	0	90	0	0	42	21	11	0
RT Vol	0	0	78	0	0	524	0	0	3	0	27
Lane Flow Rate	443	445	85	21	103	602	124	58	33	18	45
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	1.013	1.015	0.166	0.051	0.243	1.293	0.345	0.155	0.088	0.052	0.119
Departure Headway (Hd)	8.791	8.769	7.581	9.088	8.579	7.867	10.555	10.041	9.951	10.455	9.755
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	416	418	476	396	421	464	342	359	362	345	370
Service Time	6.491	6.469	5.281	6.788	6.279	5.567	8.255	7.741	7.651	8.155	7.455
HCM Lane V/C Ratio	1.065	1.065	0.179	0.053	0.245	1.297	0.363	0.162	0.091	0.052	0.122
HCM Control Delay	77.8	78.2	11.8	12.3	14	171	18.7	14.6	13.6	13.7	13.8
HCM Lane LOS	F	F	B	B	B	F	C	B	B	B	B
HCM 95th-tile Q	12.8	12.9	0.6	0.2	0.9	25.5	1.5	0.5	0.3	0.2	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↰	↱
Traffic Vol, veh/h	0	0	11	27
Future Vol, veh/h	0	0	11	27
Peak Hour Factor	0.92	0.60	0.60	0.60
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	0	18	45
Number of Lanes	0	0	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	13.8
HCM LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	457	56	123	776	1	52	6	129	19	0	8
Future Volume (veh/h)	1	457	56	123	776	1	52	6	129	19	0	8
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.95	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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	1	486	60	129	817	1	88	10	219	46	0	20
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.59	0.59	0.59	0.41	0.41	0.41
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	794	657	163	963	813	114	15	323	57	0	302
Arrive On Green	0.00	0.43	0.43	0.09	0.52	0.52	0.06	0.22	0.22	0.03	0.00	0.19
Sat Flow, veh/h	1774	1863	1541	1774	1863	1571	1774	66	1448	1774	0	1583
Grp Volume(v), veh/h	1	486	60	129	817	1	88	0	229	46	0	20
Grp Sat Flow(s),veh/h/ln	1774	1863	1541	1774	1863	1571	1774	0	1514	1774	0	1583
Q Serve(g_s), s	0.0	14.7	1.7	5.2	27.4	0.0	3.6	0.0	10.1	1.9	0.0	0.8
Cycle Q Clear(g_c), s	0.0	14.7	1.7	5.2	27.4	0.0	3.6	0.0	10.1	1.9	0.0	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.96	1.00		1.00
Lane Grp Cap(c), veh/h	2	794	657	163	963	813	114	0	338	57	0	302
V/C Ratio(X)	0.41	0.61	0.09	0.79	0.85	0.00	0.77	0.00	0.68	0.80	0.00	0.07
Avail Cap(c_a), veh/h	73	884	731	220	1037	875	244	0	562	73	0	435
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.3	16.2	12.5	32.3	15.1	8.5	33.5	0.0	25.9	35.0	0.0	24.1
Incr Delay (d2), s/veh	36.2	1.3	0.1	9.3	6.7	0.0	10.5	0.0	2.4	30.5	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	0.0	7.9	0.7	3.0	15.6	0.0	2.1	0.0	4.4	1.4	0.0	0.3
LnGrp Delay(d),s/veh	72.5	17.5	12.5	41.6	21.8	8.5	44.1	0.0	28.3	65.4	0.0	24.1
LnGrp LOS	E	B	B	D	C	A	D		C	E		C
Approach Vol, veh/h		547			947			317			66	
Approach Delay, s/veh		17.1			24.5			32.6			52.9	
Approach LOS		B			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	35.5	6.3	20.2	4.1	42.1	8.7	17.9
Change Period (Y+Rc), s	4.0	4.5	4.0	4.0	4.0	4.5	4.0	4.0
Max Green Setting (Gmax), s	9.0	34.5	3.0	27.0	3.0	40.5	10.0	20.0
Max Q Clear Time (g_c+I1), s	7.2	16.7	3.9	12.1	2.0	29.4	5.6	2.8
Green Ext Time (p_c), s	0.0	11.9	0.0	1.4	0.0	8.2	0.1	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.7
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	51.6
Intersection LOS	F

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Lane Configurations									
Traffic Vol, veh/h	0	67	414	0	490	66	0	147	143
Future Vol, veh/h	0	67	414	0	490	66	0	147	143
Peak Hour Factor	0.92	0.82	0.82	0.92	0.94	0.94	0.92	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	82	505	0	521	70	0	186	181
Number of Lanes	0	1	1	0	1	0	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	44.4	81.3	15.2
HCM LOS	E	F	C

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	88%	0%	0%
Vol Right, %	0%	0%	12%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	67	414	556	147	143
LT Vol	67	0	0	147	0
Through Vol	0	414	490	0	0
RT Vol	0	0	66	0	143
Lane Flow Rate	82	505	591	186	181
Geometry Grp	7	7	4	7	7
Degree of Util (X)	0.162	0.931	1.063	0.417	0.345
Departure Headway (Hd)	7.351	6.839	6.472	8.329	7.091
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	491	535	562	435	510
Service Time	5.051	4.539	4.526	6.029	4.791
HCM Lane V/C Ratio	0.167	0.944	1.052	0.428	0.355
HCM Control Delay	11.5	49.7	81.3	16.9	13.5
HCM Lane LOS	B	E	F	C	B
HCM 95th-tile Q	0.6	11.5	17.2	2	1.5

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	58	461	44	30	41	0	0	26	22
Future Vol, veh/h	0	0	0	58	461	44	30	41	0	0	26	22
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	0	0	0	2
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	66	66	66	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	63	501	48	45	62	0	0	28	24

Major/Minor	Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	679	675	-	-	651	527
Stage 1	-	-	-	0	0	-	-	651	-
Stage 2	-	-	-	679	675	-	-	0	-
Critical Hdwy	4.12	-	-	7.12	6.52	-	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-	-	-	-
Follow-up Hdwy	2.218	-	-	3.518	4.018	-	-	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	366	376	0	0	388	551
Stage 1	-	-	-	-	-	0	0	465	-
Stage 2	-	-	-	441	453	0	0	-	-
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	331	376	-	-	388	551
Mov Cap-2 Maneuver	-	-	-	331	376	-	-	388	-
Stage 1	-	-	-	-	-	-	-	465	-
Stage 2	-	-	-	396	453	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		17	14.1
HCM LOS		C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	331	376	-	-	-	449
HCM Lane V/C Ratio	0.137	0.165	-	-	-	0.116
HCM Control Delay (s)	17.6	16.5	-	-	-	14.1
HCM Lane LOS	C	C	-	-	-	B
HCM 95th %tile Q(veh)	0.5	0.6	-	-	-	0.4

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	438	56	0	0	0	0	31	34	24	60	0
Future Vol, veh/h	40	438	56	0	0	0	0	31	34	24	60	0
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	3	3	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	85	-	100	0	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	92	92	92	66	66	66	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	534	68	0	0	0	0	47	52	26	65	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	0	0	0	-	668	573	692	702	-
Stage 1	-	-	-	-	668	-	0	0	-
Stage 2	-	-	-	-	0	-	692	702	-
Critical Hdwy	4.12	-	-	-	6.52	6.22	7.12	6.52	-
Critical Hdwy Stg 1	-	-	-	-	5.52	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	-	4.018	3.318	3.518	4.018	-
Pot Cap-1 Maneuver	-	-	-	0	379	519	358	362	0
Stage 1	-	-	-	0	456	-	-	-	0
Stage 2	-	-	-	0	-	-	434	440	0
Platoon blocked, %		-	-						
Mov Cap-1 Maneuver	-	-	-	-	378	518	292	361	-
Mov Cap-2 Maneuver	-	-	-	-	378	-	292	361	-
Stage 1	-	-	-	-	455	-	-	-	-
Stage 2	-	-	-	-	-	-	350	439	-

Approach	EB	NB	SB
HCM Control Delay, s		13.9	17.6
HCM LOS		B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	SBLn1	SBLn2
Capacity (veh/h)	378	378	518	-	-	-	292	361
HCM Lane V/C Ratio	0.062	0.062	0.099	-	-	-	0.089	0.181
HCM Control Delay (s)	15.2	15.2	12.7	-	-	-	18.5	17.2
HCM Lane LOS	C	C	B	-	-	-	C	C
HCM 95th %tile Q(veh)	0.2	0.2	0.3	-	-	-	0.3	0.7

Intersection	
Intersection Delay, s/veh	89.4
Intersection LOS	F

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations									
Traffic Vol, veh/h	0	290	95	0	517	354	0	112	417
Future Vol, veh/h	0	290	95	0	517	354	0	112	417
Peak Hour Factor	0.92	0.89	0.89	0.92	0.95	0.95	0.92	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	326	107	0	544	373	0	137	509
Number of Lanes	0	1	1	0	1	2	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	3
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	40.4	96.1	112.8
HCM LOS	E	F	F

Lane	NBLn1	NBLn2	NBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	517	177	177	290	95	112	417
LT Vol	0	0	0	290	0	112	0
Through Vol	517	0	0	0	0	0	417
RT Vol	0	177	177	0	95	0	0
Lane Flow Rate	544	186	186	326	107	137	509
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	1.238	0.388	0.298	0.844	0.241	0.341	1.197
Departure Headway (Hd)	8.646	7.921	6.125	10.108	8.865	9.507	8.986
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	424	456	591	362	408	381	407
Service Time	6.346	5.621	3.825	7.808	6.565	7.207	6.686
HCM Lane V/C Ratio	1.283	0.408	0.315	0.901	0.262	0.36	1.251
HCM Control Delay	152.6	15.6	11.4	48.9	14.4	17	138.5
HCM Lane LOS	F	C	B	E	B	C	F
HCM 95th-tile Q	21.4	1.8	1.2	7.7	0.9	1.5	19.2

HCM Signalized Intersection Capacity Analysis
10: Crow Canyon Rd/Blackhawk Rd & Camino Tassajara

Timing Plan: PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	813	256	387	491	336	417	589	604	355	378	198
Future Volume (vph)	230	813	256	387	491	336	417	589	604	355	378	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Lane Util. Factor	0.97	0.95	1.00	0.94	0.95		0.97	0.91	0.91	0.97	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.96	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1556	4990	3302		3433	3233	1422	3433	3539	1563
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1556	4990	3302		3433	3233	1422	3433	3539	1563
Peak-hour factor, PHF	0.89	0.89	0.89	0.88	0.88	0.88	0.91	0.91	0.91	0.98	0.98	0.98
Adj. Flow (vph)	258	913	288	440	558	382	458	647	664	362	386	202
RTOR Reduction (vph)	0	0	194	0	107	0	0	34	113	0	0	139
Lane Group Flow (vph)	258	913	94	440	833	0	458	872	292	362	386	63
Confl. Peds. (#/hr)			5			2			1			1
Confl. Bikes (#/hr)			2			3						
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Actuated Green, G (s)	10.9	36.2	36.2	7.7	33.0		11.6	36.6	36.6	9.6	34.2	34.2
Effective Green, g (s)	10.9	36.2	36.2	7.7	33.0		11.6	36.6	36.6	9.6	34.2	34.2
Actuated g/C Ratio	0.10	0.33	0.33	0.07	0.30		0.10	0.33	0.33	0.09	0.31	0.31
Clearance Time (s)	4.5	5.9	5.9	4.5	5.9		4.5	5.5	5.5	4.5	5.9	5.9
Vehicle Extension (s)	2.0	4.0	4.0	2.0	4.0		2.0	4.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	338	1159	509	347	986		360	1070	470	298	1095	483
v/s Ratio Prot	0.08	c0.26		c0.09	c0.25		c0.13	c0.27		0.11	0.11	
v/s Ratio Perm			0.06						0.21			0.04
v/c Ratio	0.76	0.79	0.19	1.27	0.85		1.27	0.81	0.62	1.21	0.35	0.13
Uniform Delay, d1	48.5	33.7	26.6	51.4	36.4		49.5	33.8	31.1	50.5	29.6	27.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.9	3.8	0.2	141.5	7.0		142.6	5.1	2.9	123.4	0.3	0.2
Delay (s)	57.4	37.5	26.8	192.9	43.4		192.0	39.0	34.0	173.9	29.8	27.6
Level of Service	E	D	C	F	D		F	D	C	F	C	C
Approach Delay (s)		38.9			91.1			77.5			84.2	
Approach LOS		D			F			E			F	

Intersection Summary			
HCM 2000 Control Delay	71.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	110.5	Sum of lost time (s)	20.8
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	533	28	15	498	16	9
Future Vol, veh/h	533	28	15	498	16	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	75	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	579	30	16	541	17	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	579	0	1153	579
Stage 1	-	-	-	-	579	-
Stage 2	-	-	-	-	574	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	995	-	218	515
Stage 1	-	-	-	-	560	-
Stage 2	-	-	-	-	563	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	995	-	214	515
Mov Cap-2 Maneuver	-	-	-	-	214	-
Stage 1	-	-	-	-	560	-
Stage 2	-	-	-	-	554	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	19.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	214	515	-	-	995	-
HCM Lane V/C Ratio	0.081	0.019	-	-	0.016	-
HCM Control Delay (s)	23.3	12.1	-	-	8.7	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	89	0	3	98
Future Vol, veh/h	0	1	89	0	3	98
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	97	0	3	107

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	210	97	0	0	97	0
Stage 1	97	-	-	-	-	-
Stage 2	113	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	778	959	-	-	1496	-
Stage 1	927	-	-	-	-	-
Stage 2	912	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	776	959	-	-	1496	-
Mov Cap-2 Maneuver	776	-	-	-	-	-
Stage 1	927	-	-	-	-	-
Stage 2	910	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	959	1496	-
HCM Lane V/C Ratio	-	-	0.001	0.002	-
HCM Control Delay (s)	-	-	8.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Cumulative plus Project Conditions (Mitigated)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	53	432	82	107	1	934	13	31	3	25	28
Future Volume (vph)	25	53	432	82	107	1	934	13	31	3	25	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		0.95	0.95	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00		1.00	1.00	0.98		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00		1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.99	1.00
Satd. Flow (prot)	1767	1863	1536	1754	3534		1681	1688	1549		1852	1583
Flt Permitted	0.68	1.00	1.00	0.70	1.00		0.73	0.71	1.00		0.95	1.00
Satd. Flow (perm)	1269	1863	1536	1292	3534		1301	1251	1549		1776	1583
Peak-hour factor, PHF	0.60	0.60	0.60	0.98	0.98	0.98	0.69	0.69	0.69	0.82	0.82	0.82
Adj. Flow (vph)	42	88	720	84	109	1	1354	19	45	4	30	34
RTOR Reduction (vph)	0	0	571	0	1	0	0	0	16	0	0	12
Lane Group Flow (vph)	42	88	149	84	109	0	691	682	29	0	34	22
Confl. Peds. (#/hr)	1		6	6		1			1	1		
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	12.8	12.8	12.8	12.8	12.8		39.9	39.9	39.9		39.9	39.9
Effective Green, g (s)	12.8	12.8	12.8	12.8	12.8		39.9	39.9	39.9		39.9	39.9
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21		0.65	0.65	0.65		0.65	0.65
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	263	386	318	268	733		841	808	1001		1148	1023
v/s Ratio Prot		0.05			0.03							
v/s Ratio Perm	0.03		c0.10	0.07			0.53	c0.55	0.02		0.02	0.01
v/c Ratio	0.16	0.23	0.47	0.31	0.15		0.82	0.84	0.03		0.03	0.02
Uniform Delay, d1	20.0	20.3	21.5	20.7	20.0		8.2	8.5	3.9		3.9	3.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.3	0.3	1.1	0.7	0.1		6.5	8.0	0.0		0.0	0.0
Delay (s)	20.3	20.6	22.6	21.4	20.1		14.7	16.5	3.9		3.9	3.9
Level of Service	C	C	C	C	C		B	B	A		A	A
Approach Delay (s)		22.3			20.7			15.2			3.9	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	61.7	Sum of lost time (s)	9.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	280	357	535	243	122	120
Future Volume (veh/h)	280	357	535	243	122	120
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	326	415	575	261	235	0
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.93	0.93	0.52	0.52
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	411	1370	893	405	279	249
Arrive On Green	0.74	0.74	0.74	0.74	0.16	0.00
Sat Flow, veh/h	654	1863	1214	551	1774	1583
Grp Volume(v), veh/h	326	415	0	836	235	0
Grp Sat Flow(s),veh/h/ln	654	1863	0	1765	1774	1583
Q Serve(g_s), s	41.6	6.3	0.0	19.9	10.8	0.0
Cycle Q Clear(g_c), s	61.5	6.3	0.0	19.9	10.8	0.0
Prop In Lane	1.00			0.31	1.00	1.00
Lane Grp Cap(c), veh/h	411	1370	0	1298	279	249
V/C Ratio(X)	0.79	0.30	0.00	0.64	0.84	0.00
Avail Cap(c_a), veh/h	411	1370	0	1298	414	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.1	3.8	0.0	5.6	34.2	0.0
Incr Delay (d2), s/veh	10.1	0.1	0.0	1.1	9.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	3.3	0.0	9.9	6.0	0.0
LnGrp Delay(d),s/veh	31.2	3.9	0.0	6.7	44.1	0.0
LnGrp LOS	C	A		A	D	
Approach Vol, veh/h		741	836		235	
Approach Delay, s/veh		15.9	6.7		44.1	
Approach LOS		B	A		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				66.0		17.6		66.0
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				61.5		19.5		61.5
Max Q Clear Time (g_c+I1), s				63.5		12.8		21.9
Green Ext Time (p_c), s				0.0		0.4		16.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	359	31	26	591	22	106	13	41	28	1	57
Future Volume (veh/h)	27	359	31	26	591	22	106	13	41	28	1	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	0.99		0.99	0.99		0.99
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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	30	399	34	31	704	26	116	14	45	35	1	72
Adj No. of Lanes	0	1	0	0	1	0	1	1	1	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.84	0.84	0.84	0.91	0.91	0.91	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	135	930	76	124	1009	36	442	300	252	190	28	164
Arrive On Green	0.58	0.58	0.58	0.58	0.58	0.58	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	46	1591	130	31	1728	62	1310	1863	1564	339	171	1020
Grp Volume(v), veh/h	463	0	0	761	0	0	116	14	45	108	0	0
Grp Sat Flow(s),veh/h/ln	1767	0	0	1822	0	0	1310	1863	1564	1530	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9	0.5	0.0	0.0
Cycle Q Clear(g_c), s	4.9	0.0	0.0	10.2	0.0	0.0	2.1	0.2	0.9	2.1	0.0	0.0
Prop In Lane	0.06		0.07	0.04		0.03	1.00		1.00	0.32		0.67
Lane Grp Cap(c), veh/h	1141	0	0	1170	0	0	442	300	252	381	0	0
V/C Ratio(X)	0.41	0.00	0.00	0.65	0.00	0.00	0.26	0.05	0.18	0.28	0.00	0.00
Avail Cap(c_a), veh/h	1702	0	0	1769	0	0	917	976	819	918	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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.1	0.0	0.0	5.2	0.0	0.0	13.3	12.5	12.8	13.3	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.6	0.0	0.0	0.3	0.1	0.3	0.4	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	2.5	0.0	0.0	5.3	0.0	0.0	1.0	0.1	0.4	1.0	0.0	0.0
LnGrp Delay(d),s/veh	4.3	0.0	0.0	5.8	0.0	0.0	13.6	12.6	13.1	13.7	0.0	0.0
LnGrp LOS	A			A			B	B	B	B		
Approach Vol, veh/h		463			761			175			108	
Approach Delay, s/veh		4.3			5.8			13.4			13.7	
Approach LOS		A			A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		10.2		25.1		10.2		25.1
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		18.5		32.5		18.5		32.5
Max Q Clear Time (g_c+I1), s		4.1		6.9		4.1		12.2
Green Ext Time (p_c), s		1.1		9.3		1.1		8.4

Intersection Summary	
HCM 2010 Ctrl Delay	6.8
HCM 2010 LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	315	216	415	142	96	374
Future Volume (veh/h)	315	216	415	142	96	374
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	375	257	576	197	105	411
Adj No. of Lanes	1	1	1	2	1	1
Peak Hour Factor	0.84	0.84	0.72	0.72	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	493	440	952	1422	372	952
Arrive On Green	0.28	0.28	0.51	0.51	0.51	0.51
Sat Flow, veh/h	1774	1583	1863	2781	694	1863
Grp Volume(v), veh/h	375	257	576	197	105	411
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1391	694	1863
Q Serve(g_s), s	8.3	6.0	9.3	1.6	5.4	5.9
Cycle Q Clear(g_c), s	8.3	6.0	9.3	1.6	14.7	5.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	493	440	952	1422	372	952
V/C Ratio(X)	0.76	0.58	0.60	0.14	0.28	0.43
Avail Cap(c_a), veh/h	811	724	1157	1728	448	1157
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.1	13.3	7.4	5.5	12.6	6.5
Incr Delay (d2), s/veh	2.5	1.2	0.6	0.0	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	2.7	4.8	0.6	1.1	3.1
LnGrp Delay(d),s/veh	16.6	14.5	8.0	5.5	13.0	6.8
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	632		773			516
Approach Delay, s/veh	15.7		7.4			8.1
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.3				26.3		16.4
Change Period (Y+Rc), s		4.5				4.5		4.5
Max Green Setting (Gmax), s		26.5				26.5		19.5
Max Q Clear Time (g_c+I1), s		11.3				16.7		10.3
Green Ext Time (p_c), s		6.7				5.1		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	10.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	100	677	65	94	1	572	18	92	2	14	36
Future Volume (vph)	31	100	677	65	94	1	572	18	92	2	14	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		0.95	0.95	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00		1.00	1.00	0.98		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	0.98	1.00		1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00		0.99	1.00
Satd. Flow (prot)	1763	1863	1517	1737	3534		1681	1690	1548		1851	1583
Flt Permitted	0.68	1.00	1.00	0.66	1.00		0.74	0.72	1.00		0.96	1.00
Satd. Flow (perm)	1269	1863	1517	1215	3534		1311	1275	1548		1783	1583
Peak-hour factor, PHF	0.69	0.69	0.69	0.88	0.88	0.88	0.86	0.86	0.86	0.65	0.65	0.65
Adj. Flow (vph)	45	145	981	74	107	1	665	21	107	3	22	55
RTOR Reduction (vph)	0	0	606	0	1	0	0	0	66	0	0	34
Lane Group Flow (vph)	45	145	375	74	107	0	339	347	41	0	25	21
Confl. Peds. (#/hr)	4		21	21		4			2	2		
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	14.8	14.8	14.8	14.8	14.8		14.9	14.9	14.9		14.9	14.9
Effective Green, g (s)	14.8	14.8	14.8	14.8	14.8		14.9	14.9	14.9		14.9	14.9
Actuated g/C Ratio	0.38	0.38	0.38	0.38	0.38		0.39	0.39	0.39		0.39	0.39
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	485	712	580	464	1351		504	490	596		686	609
v/s Ratio Prot		0.08			0.03							
v/s Ratio Perm	0.04		c0.25	0.06			0.26	c0.27	0.03		0.01	0.01
v/c Ratio	0.09	0.20	0.65	0.16	0.08		0.67	0.71	0.07		0.04	0.03
Uniform Delay, d1	7.7	8.0	9.8	7.9	7.6		9.9	10.1	7.5		7.4	7.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.1	2.5	0.2	0.0		3.5	4.6	0.0		0.0	0.0
Delay (s)	7.7	8.1	12.3	8.0	7.6		13.4	14.7	7.6		7.4	7.4
Level of Service	A	A	B	A	A		B	B	A		A	A
Approach Delay (s)		11.6			7.8			13.2			7.4	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	38.7	Sum of lost time (s)	9.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	119	624	435	47	81	182
Future Volume (veh/h)	119	624	435	47	81	182
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	138	726	483	52	111	0
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.90	0.90	0.73	0.73
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	583	1120	994	107	253	225
Arrive On Green	0.60	0.60	0.60	0.60	0.14	0.00
Sat Flow, veh/h	866	1863	1653	178	1774	1583
Grp Volume(v), veh/h	138	726	0	535	111	0
Grp Sat Flow(s),veh/h/ln	866	1863	0	1831	1774	1583
Q Serve(g_s), s	3.8	8.9	0.0	5.8	2.0	0.0
Cycle Q Clear(g_c), s	9.5	8.9	0.0	5.8	2.0	0.0
Prop In Lane	1.00			0.10	1.00	1.00
Lane Grp Cap(c), veh/h	583	1120	0	1101	253	225
V/C Ratio(X)	0.24	0.65	0.00	0.49	0.44	0.00
Avail Cap(c_a), veh/h	864	1723	0	1694	934	834
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	6.6	4.6	0.0	3.9	13.8	0.0
Incr Delay (d2), s/veh	0.2	0.6	0.0	0.3	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	4.6	0.0	2.9	1.1	0.0
LnGrp Delay(d),s/veh	6.8	5.2	0.0	4.3	15.0	0.0
LnGrp LOS	A	A		A	B	
Approach Vol, veh/h		864	535		111	
Approach Delay, s/veh		5.5	4.3		15.0	
Approach LOS		A	A		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				25.6		9.5		25.6
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				32.5		18.5		32.5
Max Q Clear Time (g_c+I1), s				11.5		4.0		7.8
Green Ext Time (p_c), s				9.6		0.2		10.4

Intersection Summary	
HCM 2010 Ctrl Delay	5.7
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	551	71	34	409	35	40	0	45	46	2	24
Future Volume (veh/h)	48	551	71	34	409	35	40	0	45	46	2	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	0.99		0.99	0.99		0.99
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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	57	656	85	41	499	43	52	0	58	64	3	33
Adj No. of Lanes	0	1	0	0	1	0	1	1	1	0	1	0
Peak Hour Factor	0.84	0.84	0.84	0.82	0.82	0.82	0.77	0.77	0.77	0.72	0.72	0.72
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	145	923	115	138	963	79	412	265	223	270	28	69
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.14	0.00	0.14	0.14	0.14	0.14
Sat Flow, veh/h	66	1500	187	56	1565	129	1359	1863	1572	782	197	482
Grp Volume(v), veh/h	798	0	0	583	0	0	52	0	58	100	0	0
Grp Sat Flow(s),veh/h/ln	1753	0	0	1750	0	0	1359	1863	1572	1461	0	0
Q Serve(g_s), s	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.5	0.0	0.0
Cycle Q Clear(g_c), s	11.2	0.0	0.0	6.6	0.0	0.0	1.0	0.0	1.2	2.2	0.0	0.0
Prop In Lane	0.07		0.11	0.07		0.07	1.00		1.00	0.64		0.33
Lane Grp Cap(c), veh/h	1182	0	0	1181	0	0	412	265	223	367	0	0
V/C Ratio(X)	0.67	0.00	0.00	0.49	0.00	0.00	0.13	0.00	0.26	0.27	0.00	0.00
Avail Cap(c_a), veh/h	1623	0	0	1612	0	0	896	929	784	871	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	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.9	0.0	0.0	4.0	0.0	0.0	14.1	0.0	14.2	14.6	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.6	0.4	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	5.5	0.0	0.0	3.3	0.0	0.0	0.5	0.0	0.6	1.0	0.0	0.0
LnGrp Delay(d),s/veh	5.6	0.0	0.0	4.3	0.0	0.0	14.2	0.0	14.8	15.0	0.0	0.0
LnGrp LOS	A			A			B		B	B		
Approach Vol, veh/h		798			583			110			100	
Approach Delay, s/veh		5.6			4.3			14.5			15.0	
Approach LOS		A			A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		9.8		27.3		9.8		27.3
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		18.5		32.5		18.5		32.5
Max Q Clear Time (g_c+I1), s		3.2		13.2		4.2		8.6
Green Ext Time (p_c), s		0.8		9.7		0.7		10.8

Intersection Summary	
HCM 2010 Ctrl Delay	6.3
HCM 2010 LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	308	178	388	357	142	533
Future Volume (veh/h)	308	178	388	357	142	533
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	328	189	422	388	171	642
Adj No. of Lanes	1	1	1	2	1	1
Peak Hour Factor	0.94	0.94	0.92	0.92	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	430	384	1040	1555	447	1040
Arrive On Green	0.24	0.24	0.56	0.56	0.56	0.56
Sat Flow, veh/h	1774	1583	1863	2784	670	1863
Grp Volume(v), veh/h	328	189	422	388	171	642
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1392	670	1863
Q Serve(g_s), s	7.8	4.6	5.9	3.2	8.8	10.5
Cycle Q Clear(g_c), s	7.8	4.6	5.9	3.2	14.7	10.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	430	384	1040	1555	447	1040
V/C Ratio(X)	0.76	0.49	0.41	0.25	0.38	0.62
Avail Cap(c_a), veh/h	725	647	1338	1999	554	1338
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	14.7	5.7	5.1	9.9	6.7
Incr Delay (d2), s/veh	2.8	1.0	0.3	0.1	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	2.1	3.0	1.3	1.7	5.3
LnGrp Delay(d),s/veh	18.7	15.7	6.0	5.2	10.4	7.3
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	517		810			813
Approach Delay, s/veh	17.6		5.6			8.0
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		29.8				29.8		15.5
Change Period (Y+Rc), s		4.5				4.5		4.5
Max Green Setting (Gmax), s		32.5				32.5		18.5
Max Q Clear Time (g_c+I1), s		7.9				16.7		9.8
Green Ext Time (p_c), s		10.9				8.6		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	9.4
HCM 2010 LOS	A

HCM Signalized Intersection Capacity Analysis
5: Green Valley Rd & Stone Valley Rd

Timing Plan: PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	90	524	89	63	3	799	18	78	0	11	27
Future Volume (vph)	18	90	524	89	63	3	799	18	78	0	11	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		0.95	0.95	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		1.00	1.00
Satd. Flow (prot)	1766	1863	1545	1763	3513		1681	1689	1548		1863	1583
Flt Permitted	0.69	1.00	1.00	0.69	1.00		0.75	0.72	1.00		1.00	1.00
Satd. Flow (perm)	1291	1863	1545	1281	3513		1320	1279	1548		1863	1583
Peak-hour factor, PHF	0.87	0.87	0.87	0.72	0.72	0.72	0.92	0.92	0.92	0.60	0.60	0.60
Adj. Flow (vph)	21	103	602	124	88	4	868	20	85	0	18	45
RTOR Reduction (vph)	0	0	437	0	3	0	0	0	43	0	0	23
Lane Group Flow (vph)	21	103	165	124	89	0	443	445	42	0	18	22
Confl. Peds. (#/hr)	2		4	4		2			2	2		
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm		NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	10.9	10.9	10.9	10.9	10.9		19.8	19.8	19.8		19.8	19.8
Effective Green, g (s)	10.9	10.9	10.9	10.9	10.9		19.8	19.8	19.8		19.8	19.8
Actuated g/C Ratio	0.27	0.27	0.27	0.27	0.27		0.50	0.50	0.50		0.50	0.50
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	354	511	424	351	964		658	637	772		929	789
v/s Ratio Prot		0.06			0.03						0.01	
v/s Ratio Perm	0.02		c0.11	0.10			0.34	c0.35	0.03			0.01
v/c Ratio	0.06	0.20	0.39	0.35	0.09		0.67	0.70	0.05		0.02	0.03
Uniform Delay, d1	10.6	11.1	11.7	11.6	10.7		7.5	7.7	5.1		5.0	5.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.2	0.6	0.6	0.0		2.7	3.3	0.0		0.0	0.0
Delay (s)	10.7	11.3	12.3	12.2	10.8		10.2	11.0	5.2		5.0	5.1
Level of Service	B	B	B	B	B		B	B	A		A	A
Approach Delay (s)		12.1			11.6			10.1			5.1	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	39.7	Sum of lost time (s)	9.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	67	414	490	66	147	143
Future Volume (veh/h)	67	414	490	66	147	143
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	82	505	521	70	186	0
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.82	0.82	0.94	0.94	0.79	0.79
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	287	818	706	95	670	598
Arrive On Green	0.44	0.44	0.44	0.44	0.38	0.00
Sat Flow, veh/h	822	1863	1608	216	1774	1583
Grp Volume(v), veh/h	82	505	0	591	186	0
Grp Sat Flow(s),veh/h/ln	822	1863	0	1825	1774	1583
Q Serve(g_s), s	4.5	10.2	0.0	13.2	3.6	0.0
Cycle Q Clear(g_c), s	17.7	10.2	0.0	13.2	3.6	0.0
Prop In Lane	1.00			0.12	1.00	1.00
Lane Grp Cap(c), veh/h	287	818	0	801	670	598
V/C Ratio(X)	0.29	0.62	0.00	0.74	0.28	0.00
Avail Cap(c_a), veh/h	303	855	0	838	670	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.7	10.6	0.0	11.4	10.6	0.0
Incr Delay (d2), s/veh	0.5	1.3	0.0	3.3	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	5.5	0.0	7.3	1.9	0.0
LnGrp Delay(d),s/veh	19.3	11.8	0.0	14.7	11.6	0.0
LnGrp LOS	B	B		B	B	
Approach Vol, veh/h		587	591		186	
Approach Delay, s/veh		12.9	14.7		11.6	
Approach LOS		B	B		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				26.0		23.0		26.0
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				22.5		18.5		22.5
Max Q Clear Time (g_c+I1), s				19.7		5.6		15.2
Green Ext Time (p_c), s				1.8		0.4		4.1

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	438	56	58	461	44	30	1	34	24	2	22
Future Volume (veh/h)	40	438	56	58	461	44	30	1	34	24	2	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	0.99		0.99	0.99		0.99
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
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	49	534	68	63	501	48	45	2	52	26	2	24
Adj No. of Lanes	0	1	0	0	1	0	1	1	1	0	1	0
Peak Hour Factor	0.82	0.82	0.82	0.92	0.92	0.92	0.66	0.66	0.66	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	152	861	105	172	851	77	443	298	251	240	53	113
Arrive On Green	0.57	0.57	0.57	0.57	0.57	0.57	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	65	1505	183	94	1488	135	1368	1863	1568	497	329	707
Grp Volume(v), veh/h	651	0	0	612	0	0	45	2	52	52	0	0
Grp Sat Flow(s),veh/h/ln	1754	0	0	1717	0	0	1368	1863	1568	1533	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.9	0.0	0.0	7.2	0.0	0.0	0.7	0.0	1.0	0.9	0.0	0.0
Prop In Lane	0.08		0.10	0.10		0.08	1.00		1.00	0.50		0.46
Lane Grp Cap(c), veh/h	1119	0	0	1101	0	0	443	298	251	406	0	0
V/C Ratio(X)	0.58	0.00	0.00	0.56	0.00	0.00	0.10	0.01	0.21	0.13	0.00	0.00
Avail Cap(c_a), veh/h	1784	0	0	1744	0	0	978	1026	864	973	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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.8	0.0	0.0	4.6	0.0	0.0	12.2	11.9	12.3	12.2	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.4	0.0	0.0	0.1	0.0	0.4	0.1	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	3.9	0.0	0.0	3.7	0.0	0.0	0.4	0.0	0.4	0.4	0.0	0.0
LnGrp Delay(d),s/veh	5.3	0.0	0.0	5.0	0.0	0.0	12.3	11.9	12.7	12.4	0.0	0.0
LnGrp LOS	A			A			B	B	B	B		
Approach Vol, veh/h		651			612			99			52	
Approach Delay, s/veh		5.3			5.0			12.5			12.4	
Approach LOS		A			A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		9.9		23.7		9.9		23.7
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		18.5		32.5		18.5		32.5
Max Q Clear Time (g_c+I1), s		3.0		9.9		2.9		9.2
Green Ext Time (p_c), s		0.5		9.3		0.5		9.4

Intersection Summary	
HCM 2010 Ctrl Delay	5.9
HCM 2010 LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	290	95	517	354	112	417
Future Volume (veh/h)	290	95	517	354	112	417
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	326	107	544	373	137	509
Adj No. of Lanes	1	1	1	2	1	1
Peak Hour Factor	0.89	0.89	0.95	0.95	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	432	386	990	1481	385	990
Arrive On Green	0.24	0.24	0.53	0.53	0.53	0.53
Sat Flow, veh/h	1774	1583	1863	2787	607	1863
Grp Volume(v), veh/h	326	107	544	373	137	509
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1393	607	1863
Q Serve(g_s), s	6.8	2.2	7.7	2.9	7.7	7.0
Cycle Q Clear(g_c), s	6.8	2.2	7.7	2.9	15.5	7.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	432	386	990	1481	385	990
V/C Ratio(X)	0.75	0.28	0.55	0.25	0.36	0.51
Avail Cap(c_a), veh/h	798	712	1071	1601	411	1071
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.0	12.3	6.2	5.1	11.3	6.0
Incr Delay (d2), s/veh	2.7	0.4	0.5	0.1	0.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	1.0	4.1	1.1	1.3	3.6
LnGrp Delay(d),s/veh	16.7	12.7	6.7	5.2	11.9	6.5
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	433		917			646
Approach Delay, s/veh	15.7		6.1			7.6
Approach LOS	B		A			A

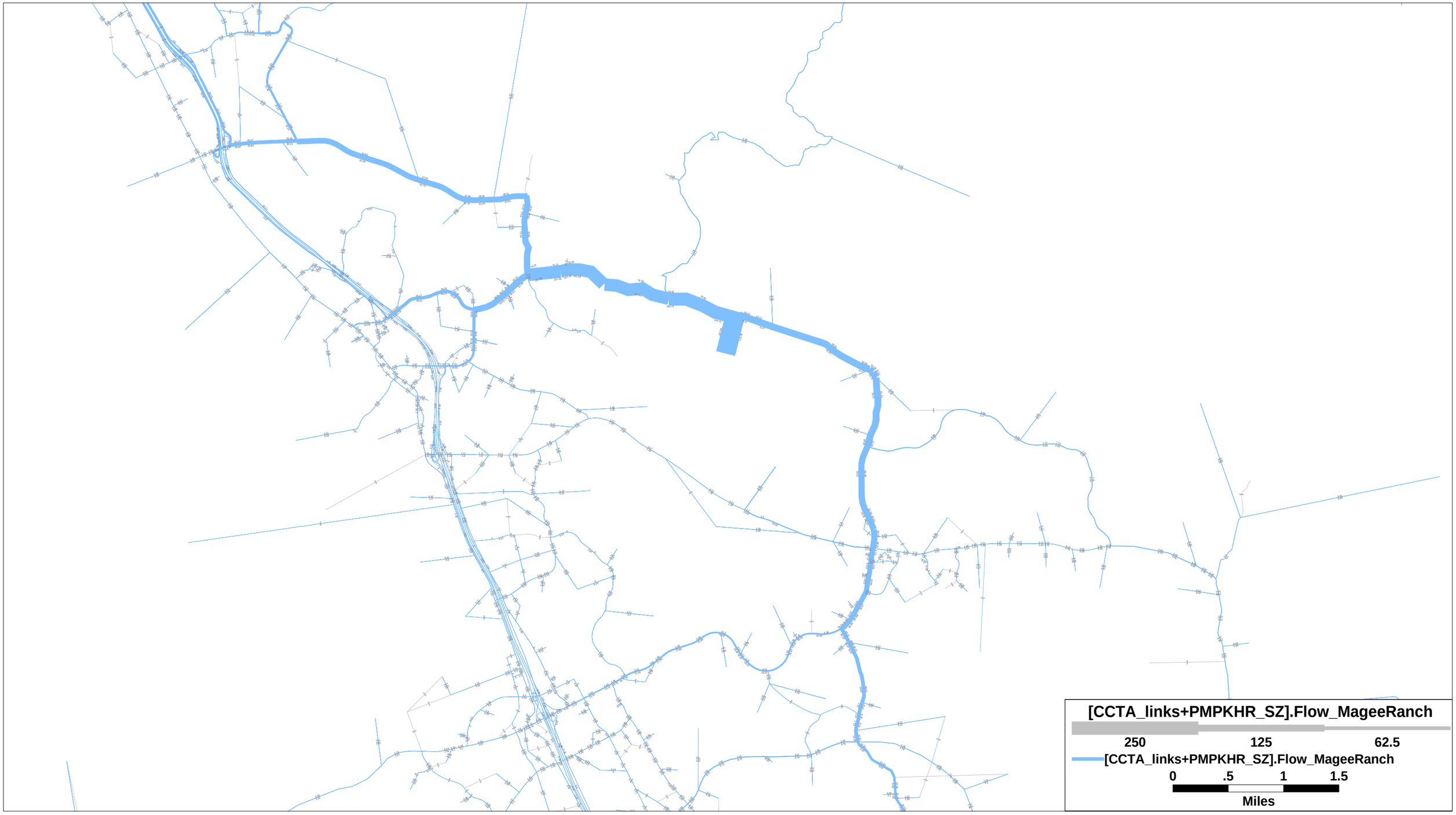
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		25.8				25.8		14.2
Change Period (Y+Rc), s		4.5				4.5		4.5
Max Green Setting (Gmax), s		23.0				23.0		18.0
Max Q Clear Time (g_c+I1), s		9.7				17.5		8.8
Green Ext Time (p_c), s		7.4				3.8		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	8.7
HCM 2010 LOS	A

Appendix F SELECT ZONE MODEL RUN RESULTS

AM Peak Period

PM Peak Period



Appendix G BICYCLE LOS ANALYSIS WORKSHEETS

Step #	Variable	Equation/Definition	Existing Conditions																															
			AM Peak Hour										School PM Peak Hour										PM Peak Hour									
			Segment #1		Segment #2		Segment #3		Segment #4		Segment #5		Segment #1		Segment #2		Segment #3		Segment #4		Segment #5		Segment #1		Segment #2		Segment #3		Segment #4		Segment #5	
			EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	Sb	Bicycle Speed (measured or assumed 15 mph)	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
2	db	db = 0.0 db = (0.5C(1-gb/C)^2)/(1-(1*gb/C))	0.00	115.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	115.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	Cycle Length	-	186	-	-	-	-	-	-	-	-	-	127	-	-	-	-	-	-	-	-	-	186	-	-	-	-	-	-	-	-
	gb	gb=Dp-l1-l2	-	45	-	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-
	Dp	Phase Duration	-	49	-	-	-	-	-	-	-	-	-	39	-	-	-	-	-	-	-	-	-	49	-	-	-	-	-	-	-	-
	l1	Loss time = 2	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
	l2	l2 = Y+Rc-e	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
	Y	Yellow Interval	-	3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
	Rc	Red Clearance	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
	e	Extension of Effective Green = 2	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
3	STb,seg	STb,seg = (3600*L)/(5280*(trb+db))	15.00	7.93	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	9.23	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	7.93	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
	tRb	tRb = (3600*L)/(5280Sb)	129.55	129.55	20.68	20.68	182.73	182.73	60.64	60.64	177.95	177.95	129.55	129.55	20.68	20.68	182.73	182.73	60.64	60.64	177.95	177.95	129.55	129.55	20.68	20.68	182.73	182.73	60.64	60.64	177.95	177.95
	L	Length (feet)	2850	2850	455	455	4020	4020	1334	1334	3915	3915	2850	2850	455	455	4020	4020	1334	1334	3915	3915	2850	2850	455	455	4020	4020	1334	1334	3915	3915
4	Ib,int	Ib,int = 4.1324+Fw+Fv	1.69	1.87	2.58	2.91	2.84	2.53	2.57	1.94	1.99	1.54	2.02	1.79	2.90	2.81	3.09	2.42	2.80	1.91	2.34	1.36	1.59	1.75	2.48	2.78	2.67	2.41	2.40	1.86	2.01	1.44
	Fw	Fw = 0.0153*Wcd-0.2144Wt	-3.37	-3.52	-2.43	-2.45	-2.12	-2.69	-2.42	-3.20	-2.79	-3.52	-3.37	-3.52	-2.43	-2.45	-2.12	-2.69	-2.42	-3.20	-2.79	-3.52	-3.37	-3.52	-2.43	-2.45	-2.12	-2.69	-2.42	-3.20	-2.79	-3.52
	Wcd	Curb-to-Curb width of Cross Street	22	50	22	22	70	22	70	22	70	22	22	50	22	22	70	22	70	22	70	22	22	50	22	22	70	22	70	22	70	22
	Wt	Wt = Wol+Wbl+Ipk*Wos	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18
	Wol	Outside Lane Width	16.5	15.6	12	12	14.7	13.1	16.3	16.2	18	18	16.5	15.6	12	12	14.7	13.1	16.3	16.2	18	18	16.5	15.6	12	12	14.7	13.1	16.3	16.2	18	18
	Wbl	Bike Lane Width	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
	Ipk	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Wos	Shoulder Width (no curb)	0.8	4.4	0.9	1	0.2	1	0	0.3	0	0	0.8	4.4	0.9	1	0.2	1	0	0.3	0	0	0.8	4.4	0.9	1	0.2	1	0	0.3	0	0
	Fv	Fv = .0066*(vlt+vth+vrt)/(4*Nth)	0.93	1.26	0.88	1.23	0.83	1.09	0.86	1.01	0.65	0.93	1.26	1.18	1.20	1.13	1.08	0.98	1.09	0.98	1.00	0.75	0.83	1.14	0.78	1.10	0.66	0.97	0.69	0.93	0.67	0.83
	vlt	Left-Turn Demand Flow Rate	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
	vth	Through Demand Flow Rate	563	765	533	744	503	658	524	610	396	563	765	718	730	686	654	593	658	595	607	455	505	692	471	669	402	589	419	566	408	500
	vrt	Right-Turn Demand Flow Rate	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
	Nth	Number of Through Lanes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	Ib,link	Ib,link = .760+Fw+Fv+Fs+Fp	3.22	2.82	3.87	3.92	3.49	3.70	3.27	3.31	2.80	2.96	3.32	2.71	3.96	3.82	3.61	3.61	3.37	3.25	3.05	2.87	3.07	2.69	3.69	3.80	3.35	3.60	3.17	3.20	2.87	2.90
	Fw	Fw = -.005*We^2	-1.50	-2.00	-0.83	-0.85	-1.11	-0.99	-1.33	-1.36	-1.62	-1.62	-1.50	-2.00	-0.83	-0.85	-1.11	-0.99	-1.33	-1.36	-1.62	-1.62	-1.50	-2.00	-0.83	-0.85	-1.11	-0.99	-1.33	-1.36	-1.62	-1.62
	We	We = Wv = Wt = Wol+Wbl+Wos	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18
	ppk	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
	Fv	Fv = .507*ln(vma/(4Nth))	2.67	2.78	2.65	2.73	2.55	2.65	2.55	2.63	2.38	2.54	2.78	2.67	2.75	2.63	2.68	2.56	2.66	2.57	2.63	2.45	2.53	2.65	2.48	2.61	2.42	2.55	2.46	2.52	2.45	2.48
	vma	vma = vm	782	956	740	875	613	748	609	709	440	605	968	772	901	715	798	624	765	640	723	506	587	752	529	690	473	614	511	578	498	532
	vm	vm = V/PHF	782	956	740	875	613	748	609	709	440	605	968	772	901	715	798	624	765	640	723	506	587	752	529	690	473	614	511	578	498	532
	PHF	Peak Hour Factor	0.72	0.8	0.72	0.85	0.82	0.88	0.86	0.86	0.9	0.93	0.79	0.93	0.81	0.96	0.82	0.95	0.86	0.93	0.84	0.9	0.86	0.92	0.89	0.97	0.85	0.96	0.82	0.98	0.82	0.94
	Nth	Number of Through Lanes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Fs	Fs = .199*[1.1199ln(SRa-20)+.8103](1+.1038*PHVa)^2	0.85	0.84	0.85	0.84	0.85	0.84	0.85	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
	SRa	SRa = SR	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	SR	SR = Vehicle Speed	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	PHVa	PHV	0.102	0.045	0.102	0.045	0.102	0.045	0.102	0.045	0.075	0.053	0.071	0.06	0.071	0.06	0.071	0.06	0.071	0.06	0.053	0.082	0.065	0.056	0.065	0.056	0.065	0.056	0.065	0.056	0.038	0.062
	PHVa	Percent Heavy Vehicle (<50%)	0.102	0.045	0.102	0.045	0.102	0.045	0.102	0.045	0.075	0.053	0.071	0.060	0.071	0.060	0.071	0.060	0.071	0.060	0.053	0.082	0.065	0.056	0.065	0.056	0.065	0.056	0.065	0.056	0.038	0.062
	Fp	Fp = 7.066/Pc^2	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
	Pc	Pavement Condition Rating	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
6	LOSlink	Link LOS	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
7	Ib,seg	Ib,seg = .160*Ib,link+.011*Fbi*e^Ib,int+.035*(Nap,s/(L/5280))+2.85	3.68	3.50	3.61	3.68	3.73	3.81	4.76	4.84	3.80	3.42	3.72	3.48	3.68	3.64	3.81	3.78	4.82	4.83	3.88	3.40	3.65	3.47	3.57	3.64	3.68	3.78	4.73	4.82	3.82	3.41
	Fbi	Fbi = 0.0 Fbi = 1.0	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1
	Nap,s	# Access Points on right side (direction of travel)	4	3	0	0	3	5	9	10	9	1	4	3	0	0	3	5	9	10	9	1	4	3	0	0	3	5	9	10	9	1
8	LOSseg	Segment LOS	D	C	D	D	D	D	E	E	D	C	D	C	D	D	D	D	E	E	D	C	D	C	D	D	D	D	E	E	D	C

Step #	Variable	Equation/Definition	Existing plus Project Conditions																															
			AM Peak Hour										School PM Peak Hour										PM Peak Hour									
			Segment #1		Segment #2		Segment #3		Segment #4		Segment #5		Segment #1		Segment #2		Segment #3		Segment #4		Segment #5		Segment #1		Segment #2		Segment #3		Segment #4		Segment #5	
			EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	Sb	Bicycle Speed (measured or assumed 15 mph)	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
2	db	db = 0.0 db = (0.5C(1-gb/C)^2)/(1-(1*gb/C))	0.00	115.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	115.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	Cycle Length	-	186	-	-	-	-	-	-	-	-	-	127	-	-	-	-	-	-	-	-	-	186	-	-	-	-	-	-	-	-
	gb	gb=Dp-l1-l2	-	45	-	-	-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-
	Dp	Phase Duration	-	49	-	-	-	-	-	-	-	-	-	39	-	-	-	-	-	-	-	-	-	49	-	-	-	-	-	-	-	-
	l1	Loss time = 2	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
	l2	l2 = Y+Rc-e	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
	Y	Yellow Interval	-	3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
	Rc	Red Clearance	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
	e	Extension of Effective Green = 2	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
3	STb,seg	STb,seg = (3600*L)/(5280*(trb+db))	15.00	7.93	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	9.23	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	7.93	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
	tRb	tRb = (3600*L)/(5280Sb)	129.55	129.55	20.68	20.68	182.73	182.73	60.64	60.64	177.95	177.95	129.55	129.55	20.68	20.68	182.73	182.73	60.64	60.64	177.95	177.95	129.55	129.55	20.68	20.68	182.73	182.73	60.64	60.64	177.95	177.95
	L	Length (feet)	2850	2850	455	455	4020	4020	1334	1334	3915	3915	2850	2850	455	455	4020	4020	1334	1334	3915	3915	2850	2850	455	455	4020	4020	1334	1334	3915	3915
4	Ib,int	Ib,int = 4.1324+Fw+Fv	1.72	1.94	2.61	2.97	2.87	2.59	2.61	2.00	2.03	1.56	2.07	1.83	2.96	2.84	3.14	2.45	2.85	1.94	2.36	1.39	1.64	1.78	2.52	2.81	2.72	2.44	2.45	1.89	2.03	1.46
	Fw	Fw = 0.0153*Wcd-0.2144Wt	-3.37	-3.52	-2.43	-2.45	-2.12	-2.69	-2.42	-3.20	-2.79	-3.52	-3.37	-3.52	-2.43	-2.45	-2.12	-2.69	-2.42	-3.20	-2.79	-3.52	-3.37	-3.52	-2.43	-2.45	-2.12	-2.69	-2.42	-3.20	-2.79	-3.52
	Wcd	Curb-to-Curb width of Cross Street	22	50	22	22	70	22	70	22	70	22	22	50	22	22	70	22	70	22	70	22	22	50	22	22	70	22	70	22	70	22
	Wt	Wt = Wol+Wbl+Ipk*Wos	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18
	Wol	Outside Lane Width	16.5	15.6	12	12	14.7	13.1	16.3	16.2	18	18	16.5	15.6	12	12	14.7	13.1	16.3	16.2	18	18	16.5	15.6	12	12	14.7	13.1	16.3	16.2	18	18
	Wbl	Bike Lane Width	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
	Ipk	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Wos	Shoulder Width (no curb)	0.8	4.4	0.9	1	0.2	1	0	0.3	0	0	0.8	4.4	0.9	1	0.2	1	0	0.3	0	0	0.8	4.4	0.9	1	0.2	1	0	0.3	0	0
	Fv	Fv = .0066*(vlt+vth+vrt)/(4*Nth)	0.96	1.33	0.91	1.29	0.86	1.15	0.90	1.07	0.69	0.95	1.31	1.22	1.26	1.16	1.13	1.01	1.14	1.01	1.02	0.78	0.88	1.17	0.82	1.13	0.71	1.00	0.74	0.96	0.69	0.85
	vlt	Left-Turn Demand Flow Rate	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
	vth	Through Demand Flow Rate	584	805	554	784	524	698	545	650	419	574	796	738	761	706	685	613	689	615	620	474	533	708	499	685	430	605	447	582	417	515
	vrt	Right-Turn Demand Flow Rate	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
	Nth	Number of Through Lanes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	Ib,link	Ib,link = .760+Fw+Fv+Fs+Fp	3.24	2.84	3.89	3.95	3.51	3.73	3.29	3.34	2.83	2.97	3.34	2.72	3.98	3.83	3.64	3.63	3.40	3.27	3.07	2.89	3.10	2.71	3.72	3.81	3.38	3.62	3.20	3.22	2.88	2.91
	Fw	Fw = -.005*We^2	-1.50	-2.00	-0.83	-0.85	-1.11	-0.99	-1.33	-1.36	-1.62	-1.62	-1.50	-2.00	-0.83	-0.85	-1.11	-0.99	-1.33	-1.36	-1.62	-1.62	-1.50	-2.00	-0.83	-0.85	-1.11	-0.99	-1.33	-1.36	-1.62	-1.62
	We	We = Wv = Wt = Wol+Wbl+Wos	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18
	ppk	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
	Fv	Fv = .507*ln(vma/(4Nth))	2.69	2.80	2.67	2.76	2.57	2.68	2.57	2.66	2.41	2.55	2.80	2.68	2.77	2.64	2.71	2.58	2.69	2.59	2.65	2.47	2.56	2.67	2.51	2.62	2.45	2.57	2.49	2.54	2.46	2.49
	vma	vma = vm	811	1006	769	922	639	793	634	756	466	617	1008	794	940	735	835	645	801	661	738	527	620	770	561	706	506	630	545	594	509	548
	vm	vm = V/PHF	811	1006	769	922	639	793	634	756	466	617	1008	794	940	735	835	645	801	661	738	527	620	770	561	706	506	630	545	594	509	548
	PHF	Peak Hour Factor	0.72	0.8	0.72	0.85	0.82	0.88	0.86	0.86	0.9	0.93	0.79	0.93	0.81	0.96	0.82	0.95	0.86	0.93	0.84	0.9	0.86	0.92	0.89	0.97	0.85	0.96	0.82	0.98	0.82	0.94
	Nth	Number of Through Lanes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Fs	Fs = .199*[1.1199ln(SRa-20)+.8103](1+.1038*PHVa)^2	0.85	0.84	0.85	0.84	0.85	0.84	0.85	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
	SRa	SRa = SR	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	SR	SR = Vehicle Speed	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	PHVa	PHV	0.102	0.045	0.102	0.045	0.102	0.045	0.102	0.045	0.075	0.053	0.071	0.06	0.071	0.06	0.071	0.06	0.071	0.06	0.053	0.082	0.065	0.056	0.065	0.056	0.065	0.056	0.065	0.056	0.038	0.062
	PHVa	Percent Heavy Vehicle (<50%)	0.102	0.045	0.102	0.045	0.102	0.045	0.102	0.045	0.075	0.053	0.071	0.060	0.071	0.060	0.071	0.060	0.071	0.060	0.053	0.082	0.065	0.056	0.065	0.056	0.065	0.056	0.065	0.056	0.038	0.062
	Fp	Fp = 7.066/Pc^2	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
	Pc	Pavement Condition Rating	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
6	LOSlink	Link LOS	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
7	Ib,seg	Ib,seg = .160*Ib,link+.011*Fbi*e^Ib,int+.035*(Nap,s/(L/5280))+2.85	3.69	3.50	3.62	3.70	3.74	3.82	4.77	4.85	3.81	3.42	3.73	3.48	3.70	3.65	3.82	3.79	4.83	4.84	3.88	3.40	3.66	3.48	3.58	3.64	3.70	3.79	4.74	4.82	3.82	3.41
	Fbi	Fbi = 0.0 Fbi = 1.0	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1
	Nap,s	# Access Points on right side (direction of travel)	4	3	0	0	3	5	9	10	9	1	4	3	0	0	3	5	9	10	9	1	4	3	0	0	3	5	9	10	9	1
8	LOSseg	Segment LOS	D	C	D	D	D	D	E	E	D	C	D	C	D	D	D	D	E	E	D	C	D	C	D	D	D	D	E	E	D	C

Step #	Variable	Equation/Definition	Cumulative Conditions																															
			AM Peak Hour										School PM Peak Hour										PM Peak Hour									
			Segment #1		Segment #2		Segment #3		Segment #4		Segment #5		Segment #1		Segment #2		Segment #3		Segment #4		Segment #5		Segment #1		Segment #2		Segment #3		Segment #4		Segment #5	
			EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	Sb	Bicycle Speed (measured or assumed 15 mph)	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
2	db	db = 0.0 db = (0.5C(1-gb/C)^2)/(1-(1*gb/C))	0.00	77.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	Cycle Length	-	135	-	-	-	-	-	-	-	-	-	125	-	-	-	-	-	-	-	-	-	125	-	-	-	-	-	-	-	-
	gb	gb=Dp-l1-l2	-	19	-	-	-	-	-	-	-	-	-	19.7	-	-	-	-	-	-	-	-	-	19	-	-	-	-	-	-	-	-
	Dp	Phase Duration	-	23	-	-	-	-	-	-	-	-	-	23.7	-	-	-	-	-	-	-	-	-	23	-	-	-	-	-	-	-	-
	l1	Loss time = 2	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
	l2	l2 = Y+Rc-e	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
	Y	Yellow Interval	-	3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
	Rc	Red Clearance	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
	e	Extension of Effective Green = 2	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
3	STb,seg	STb,seg = (3600*L)/(5280*(trb+db))	15.00	9.41	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	9.62	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	9.64	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
	tRb	tRb = (3600*L)/(5280Sb)	129.55	129.55	20.68	20.68	182.73	182.73	60.64	60.64	177.95	177.95	129.55	129.55	20.68	20.68	182.73	182.73	60.64	60.64	177.95	177.95	129.55	129.55	20.68	20.68	182.73	182.73	60.64	60.64	177.95	177.95
	L	Length (feet)	2850	2850	455	455	4020	4020	1334	1334	3915	3915	2850	2850	455	455	4020	4020	1334	1334	3915	3915	2850	2850	455	455	4020	4020	1334	1334	3915	3915
4	Ib,int	Ib,int = 4.1324+Fw+Fv	1.77	1.96	2.64	3.00	2.90	2.60	2.64	2.01	2.04	1.61	2.11	1.88	2.99	2.89	3.17	2.49	2.87	1.98	2.41	1.42	1.65	1.83	2.53	2.86	2.72	2.48	2.45	1.93	2.06	2.03
	Fw	Fw = 0.0153*Wcd-0.2144Wt	-3.37	-3.52	-2.43	-2.45	-2.12	-2.69	-2.42	-3.20	-2.79	-3.52	-3.37	-3.52	-2.43	-2.45	-2.12	-2.69	-2.42	-3.20	-2.79	-3.52	-3.37	-3.52	-2.43	-2.45	-2.12	-2.69	-2.42	-3.20	-2.79	-3.52
	Wcd	Curb-to-Curb width of Cross Street	22	50	22	22	70	22	70	22	70	22	22	50	22	22	70	22	70	22	70	22	22	50	22	22	70	22	70	22	70	22
	Wt	Wt = Wol+Wbl+Ipk*Wos	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18
	Wol	Outside Lane Width	16.5	15.6	12	12	14.7	13.1	16.3	16.2	18	18	16.5	15.6	12	12	14.7	13.1	16.3	16.2	18	18	16.5	15.6	12	12	14.7	13.1	16.3	16.2	18	18
	Wbl	Bike Lane Width	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
	Ipk	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Wos	Shoulder Width (no curb)	0.8	4.4	0.9	1	0.2	1	0	0.3	0	0	0.8	4.4	0.9	1	0.2	1	0	0.3	0	0	0.8	4.4	0.9	1	0.2	1	0	0.3	0	0
	Fv	Fv = .0066*(vlt+vth+vrt)/(4*Nth)	1.01	1.35	0.94	1.32	0.89	1.16	0.93	1.08	0.70	1.00	1.35	1.27	1.29	1.21	1.16	1.05	1.16	1.05	1.07	0.81	0.89	1.22	0.83	1.18	0.71	1.04	0.74	1.00	0.72	1.42
	vlt	Left-Turn Demand Flow Rate	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
	vth	Through Demand Flow Rate	613	819	572	798	539	705	562	654	425	604	820	770	783	735	701	636	705	638	651	488	542	742	505	717	431	632	449	607	438	858
	vrt	Right-Turn Demand Flow Rate	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
	Nth	Number of Through Lanes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	Ib,link	Ib,link = .760+Fw+Fv+Fs+Fp	3.27	2.85	3.90	3.96	3.53	3.74	3.30	3.34	2.84	3.00	3.36	2.74	3.99	3.85	3.65	3.65	3.41	3.29	3.09	2.91	3.11	2.73	3.72	3.84	3.39	3.64	3.20	3.24	2.90	3.17
	Fw	Fw = -.005*We^2	-1.50	-2.00	-0.83	-0.85	-1.11	-0.99	-1.33	-1.36	-1.62	-1.62	-1.50	-2.00	-0.83	-0.85	-1.11	-0.99	-1.33	-1.36	-1.62	-1.62	-1.50	-2.00	-0.83	-0.85	-1.11	-0.99	-1.33	-1.36	-1.62	-1.62
	We	We = Wv = Wt = Wol+Wbl+Wos	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18
	ppk	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
	Fv	Fv = .507*ln(vma/(4Nth))	2.72	2.81	2.68	2.77	2.59	2.69	2.58	2.66	2.42	2.58	2.82	2.70	2.78	2.66	2.72	2.60	2.70	2.61	2.67	2.49	2.57	2.69	2.51	2.65	2.46	2.59	2.49	2.56	2.48	2.75
	vma	vma = vm	851	1024	794	939	657	801	653	760	472	649	1038	828	967	766	855	669	820	686	775	542	630	807	567	739	507	658	548	619	534	913
	vm	vm = V/PHF	851	1024	794	939	657	801	653	760	472	649	1038	828	967	766	855	669	820	686	775	542	630	807	567	739	507	658	548	619	534	913
	PHF	Peak Hour Factor	0.72	0.8	0.72	0.85	0.82	0.88	0.86	0.86	0.9	0.93	0.79	0.93	0.81	0.96	0.82	0.95	0.86	0.93	0.84	0.9	0.86	0.92	0.89	0.97	0.85	0.96	0.82	0.98	0.82	0.94
	Nth	Number of Through Lanes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Fs	Fs = .199*[1.1199ln(SRa-20)+.8103](1+.1038*PHVa)^2	0.85	0.84	0.85	0.84	0.85	0.84	0.85	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
	SRa	SRa = SR	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	SR	SR = Vehicle Speed	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	PHVa	PHV	0.102	0.045	0.102	0.045	0.102	0.045	0.102	0.045	0.075	0.053	0.071	0.06	0.071	0.06	0.071	0.06	0.071	0.06	0.053	0.082	0.065	0.056	0.065	0.056	0.065	0.06	0.065	0.056	0.038	0.062
	PHVa	Percent Heavy Vehicle (<50%)	0.102	0.045	0.102	0.045	0.102	0.045	0.102	0.045	0.075	0.053	0.071	0.060	0.071	0.060	0.071	0.060	0.071	0.060	0.053	0.082	0.065	0.056	0.065	0.056	0.065	0.056	0.065	0.056	0.038	0.062
	Fp	Fp = 7.066/Pc^2	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
	Pc	Pavement Condition Rating	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
6	LOSlink	Link LOS	D	D	D	D	D	D	D	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
7	Ib,seg	Ib,seg = .160*Ib,link+.011*Fbi*e^Ib,int+.035*(Nap,s/(L/5280))+2.85	3.70	3.50	3.63	3.70	3.75	3.83	4.78	4.85	3.81	3.43	3.74	3.48	3.71	3.66	3.83	3.80	4.84	4.84	3.89	3.41	3.66	3.48	3.58	3.66	3.70	3.79	4.74	4.83	3.83	3.49
	Fbi	Fbi = 0.0 Fbi = 1.0	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1
	Nap,s	# Access Points on right side (direction of travel)	4	3	0	0	3	5	9	10	9	1	4	3	0	0	3	5	9	10	9	1	4	3	0	0	3	5	9	10	9	1
8	LOSseg	Segment LOS	D	C	D	D	D	D	E	E	D	C	D	C	D	D	D	D	E	E	D	C	D	C	D	D	D	D	E	E	D	C

Step #	Variable	Equation/Definition	Cumulative plus Project Conditions																															
			AM Peak Hour										School PM Peak Hour										PM Peak Hour									
			Segment #1		Segment #2		Segment #3		Segment #4		Segment #5		Segment #1		Segment #2		Segment #3		Segment #4		Segment #5		Segment #1		Segment #2		Segment #3		Segment #4		Segment #5	
			EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	Sb	Bicycle Speed (measured or assumed 15 mph)	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
2	db	db = 0.0 db = (0.5C(1-gb/C)^2)/(1-(1*gb/C))	0.00	77.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	C	Cycle Length	-	135	-	-	-	-	-	-	-	-	-	125	-	-	-	-	-	-	-	-	-	125	-	-	-	-	-	-	-	-
	gb	gb=Dp-l1-l2	-	19	-	-	-	-	-	-	-	-	-	19.7	-	-	-	-	-	-	-	-	-	19	-	-	-	-	-	-	-	-
	Dp	Phase Duration	-	23	-	-	-	-	-	-	-	-	-	23.7	-	-	-	-	-	-	-	-	-	23	-	-	-	-	-	-	-	-
	l1	Loss time = 2	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
	l2	l2 = Y+Rc-e	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
	Y	Yellow Interval	-	3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
	Rc	Red Clearance	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
	e	Extension of Effective Green = 2	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
3	STb,seg	STb,seg = (3600*L)/(5280*(trb+db))	15.00	9.41	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	9.62	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	9.64	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
	tRb	tRb = (3600*L)/(5280Sb)	129.55	129.55	20.68	20.68	182.73	182.73	60.64	60.64	177.95	177.95	129.55	129.55	20.68	20.68	182.73	182.73	60.64	60.64	177.95	177.95	129.55	129.55	20.68	20.68	182.73	182.73	60.64	60.64	177.95	177.95
	L	Length (feet)	2850	2850	455	455	4020	4020	1334	1334	3915	3915	2850	2850	455	455	4020	4020	1334	1334	3915	3915	2850	2850	455	455	4020	4020	1334	1334	3915	3915
4	Ib,int	Ib,int = 4.1324+Fw+Fv	1.81	2.03	2.68	3.06	2.93	2.67	2.67	2.08	2.08	1.62	2.16	1.91	3.04	2.93	3.22	2.52	2.92	2.02	2.44	1.45	1.70	1.86	2.58	2.91	2.77	2.53	2.50	1.98	2.11	2.07
	Fw	Fw = 0.0153*Wcd-0.2144Wt	-3.37	-3.52	-2.43	-2.45	-2.12	-2.69	-2.42	-3.20	-2.79	-3.52	-3.37	-3.52	-2.43	-2.45	-2.12	-2.69	-2.42	-3.20	-2.79	-3.52	-3.37	-3.52	-2.43	-2.45	-2.12	-2.69	-2.42	-3.20	-2.79	-3.52
	Wcd	Curb-to-Curb width of Cross Street	22	50	22	22	70	22	70	22	70	22	22	50	22	22	70	22	70	22	70	22	22	50	22	22	70	22	70	22	70	22
	Wt	Wt = Wol+Wbl+Ipk*Wos	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18
	Wol	Outside Lane Width	16.5	15.6	12	12	14.7	13.1	16.3	16.2	18	18	16.5	15.6	12	12	14.7	13.1	16.3	16.2	18	18	16.5	15.6	12	12	14.7	13.1	16.3	16.2	18	18
	Wbl	Bike Lane Width	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
	Ipk	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Wos	Shoulder Width (no curb)	0.8	4.4	0.9	1	0.2	1	0	0.3	0	0	0.8	4.4	0.9	1	0.2	1	0	0.3	0	0	0.8	4.4	0.9	1	0.2	1	0	0.3	0	0
	Fv	Fv = .0066*(vlt+vth+vrt)/(4*Nth)	1.05	1.42	0.98	1.38	0.92	1.23	0.96	1.15	0.74	1.01	1.40	1.30	1.34	1.25	1.21	1.08	1.21	1.09	1.10	0.84	0.94	1.25	0.88	1.23	0.76	1.09	0.79	1.05	0.77	1.46
	vlt	Left-Turn Demand Flow Rate	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
	vth	Through Demand Flow Rate	634	859	593	838	560	745	583	694	448	615	851	790	814	755	732	656	736	658	664	507	570	758	533	745	459	660	477	635	466	886
	vrt	Right-Turn Demand Flow Rate	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
	Nth	Number of Through Lanes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	Ib,link	Ib,link = .760+Fw+Fv+Fs+Fp	3.29	2.88	3.92	3.98	3.55	3.77	3.32	3.37	2.87	3.01	3.38	2.76	4.01	3.87	3.67	3.66	3.43	3.30	3.10	2.93	3.13	2.74	3.75	3.86	3.42	3.66	3.23	3.26	2.93	3.19
	Fw	Fw = -.005*We^2	-1.50	-2.00	-0.83	-0.85	-1.11	-0.99	-1.33	-1.36	-1.62	-1.62	-1.50	-2.00	-0.83	-0.85	-1.11	-0.99	-1.33	-1.36	-1.62	-1.62	-1.50	-2.00	-0.83	-0.85	-1.11	-0.99	-1.33	-1.36	-1.62	-1.62
	We	We = Wv = Wt = Wol+Wbl+Wos	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18
	ppk	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
	Fv	Fv = .507*ln(vma/(4Nth))	2.74	2.84	2.70	2.79	2.61	2.72	2.60	2.69	2.45	2.59	2.84	2.72	2.80	2.68	2.74	2.61	2.72	2.62	2.68	2.51	2.59	2.70	2.54	2.67	2.49	2.61	2.52	2.58	2.51	2.77
	vma	vma = vm	881	1074	824	986	683	847	678	807	498	661	1077	849	1005	786	893	691	856	708	790	563	663	824	599	768	540	688	582	648	568	943
	vm	vm = V/PHF	881	1074	824	986	683	847	678	807	498	661	1077	849	1005	786	893	691	856	708	790	563	663	824	599	768	540	688	582	648	568	943
	PHF	Peak Hour Factor	0.72	0.8	0.72	0.85	0.82	0.88	0.86	0.86	0.9	0.93	0.79	0.93	0.81	0.96	0.82	0.95	0.86	0.93	0.84	0.9	0.86	0.92	0.89	0.97	0.85	0.96	0.82	0.98	0.82	0.94
	Nth	Number of Through Lanes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Fs	Fs = .199*[1.1199ln(SRa-20)+.8103](1+.1038*PHVa)^2	0.85	0.84	0.85	0.84	0.85	0.84	0.85	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
	SRa	SRa = SR	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	SR	SR = Vehicle Speed	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	PHVa	PHV	0.102	0.045	0.102	0.045	0.102	0.045	0.102	0.045	0.075	0.053	0.071	0.06	0.071	0.06	0.071	0.06	0.071	0.06	0.053	0.082	0.065	0.056	0.065	0.056	0.065	0.056	0.065	0.056	0.038	0.062
	PHVa	Percent Heavy Vehicle (<50%)	0.102	0.045	0.102	0.045	0.102	0.045	0.102	0.045	0.075	0.053	0.071	0.060	0.071	0.060	0.071	0.060	0.071	0.060	0.053	0.082	0.065	0.056	0.065	0.056	0.065	0.056	0.065	0.056	0.038	0.062
	Fp	Fp = 7.066/Pc^2	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
	Pc	Pavement Condition Rating	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
6	LOSlink	Link LOS	D	E	D	D	D	D	D	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
7	Ib,seg	Ib,seg = .160*Ib,link+.011*Fbi*e^Ib,int+.035*(Nap,s/(L/5280))+2.85	3.70	3.51	3.64	3.72	3.76	3.84	4.79	4.86	3.82	3.43	3.75	3.49	3.72	3.68	3.85	3.80	4.85	4.85	3.90	3.41	3.67	3.48	3.60	3.67	3.71	3.80	4.75	4.84	3.83	3.49
	Fbi	Fbi = 0.0 Fbi = 1.0	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1
	Nap,s	# Access Points on right side (direction of travel)	4	3	0	0	3	5	9	10	9	1	4	3	0	0	3	5	9	10	9	1	4	3	0	0	3	5	9	10	9	1
8	LOSseg	Segment LOS	D	D	D	D	D	D	E	E	D	C	D	C	D	D	D	D	E	E	D	C	D	C	D	D	D	D	E	E	D	C

Step #	Variable	Equation/Definition	Saturday Bicycle Peak Hour																																											
			Existing Conditions										Existing plus Project Conditions										Cumulative Conditions										Cumulative plus Project Conditions									
			Segment #1		Segment #2		Segment #3		Segment #4		Segment #5		Segment #1		Segment #2		Segment #3		Segment #4		Segment #5		Segment #1		Segment #2		Segment #3		Segment #4		Segment #5		Segment #1		Segment #2		Segment #3		Segment #4		Segment #5	
			EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1	Sb	Bicycle Speed (measured or assumed 15 mph)	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
2	db	db = 0.0	0.00	115.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	115.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	115.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	115.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		db = (0.5C(1-gb/C)^2)/(1-(1*gb/C))																																										
	C	Cycle Length	-	186	-	-	-	-	-	-	-	-	-	186	-	-	-	-	-	-	-	-	-	186	-	-	-	-	-	-	-	-	-	186	-	-	-	-	-	-	-	-
	gb	gb=Dp-l1-l2	-	45	-	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-
	Dp	Phase Duration	-	49	-	-	-	-	-	-	-	-	-	49	-	-	-	-	-	-	-	-	-	49	-	-	-	-	-	-	-	-	-	49	-	-	-	-	-	-	-	-
	l1	Loss time = 2	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
	l2	l2 = Y+Rc-e	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
	Y	Yellow Interval	-	3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
	Rc	Red Clearance	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
	e	Extension of Effective Green = 2	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
3	STb,seg	STb,seg = (3600*L)/(5280*(trb+db))	15.00	7.93	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	7.93	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	7.93	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	7.93	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
	tRb	tRb = (3600*L)/(5280Sb)	129.55	129.55	20.68	20.68	182.73	182.73	60.64	60.64	177.95	177.95	129.55	129.55	20.68	20.68	182.73	182.73	60.64	60.64	177.95	177.95	129.55	129.55	20.68	20.68	182.73	182.73	60.64	60.64	177.95	177.95	129.55	129.55	20.68	20.68	182.73	182.73	60.64	60.64	177.95	177.95
	L	Length (feet)	2850	2850	455	455	4020	4020	1334	1334	3915	3915	2850	2850	455	455	4020	4020	1334	1334	3915	3915	2850	2850	455	455	4020	4020	1334	1334	3915	3915	2850	2850	455	455	4020	4020	1334	1334	3915	3915
4	Ib,int	Ib,int = 4.1324+Fw+Fv	1.42	1.37	2.31	2.32	2.53	1.99	2.29	1.47	1.80	1.12	1.44	1.39	2.32	2.34	2.54	2.01	2.31	1.49	1.82	1.15	1.47	1.42	2.35	2.37	2.57	2.03	2.34	1.51	1.83	1.16	1.48	1.44	2.36	2.39	2.58	2.05	2.35	1.53	1.85	1.19
	Fw	Fw = 0.0153*Wcd-0.2144Wt	-3.37	-3.52	-2.43	-2.45	-2.12	-2.69	-2.42	-3.20	-2.79	-3.52	-3.37	-3.52	-2.43	-2.45	-2.12	-2.69	-2.42	-3.20	-2.79	-3.52	-3.37	-3.52	-2.43	-2.45	-2.12	-2.69	-2.42	-3.20	-2.79	-3.52	-3.37	-3.52	-2.43	-2.45	-2.12	-2.69	-2.42	-3.20	-2.79	-3.52
	Wcd	Curb-to-Curb width of Cross Street	22	50	22	22	70	22	70	22	70	22	22	50	22	22	70	22	70	22	70	22	22	50	22	22	70	22	70	22	70	22	22	50	22	22	70	22	70	22	70	22
	Wt	Wt = Wol+Wbl+Ipk*Wos	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18
	Wol	Outside Lane Width	16.5	15.6	12	12	14.7	13.1	16.3	16.2	18	18	16.5	15.6	12	12	14.7	13.1	16.3	16.2	18	18	16.5	15.6	12	12	14.7	13.1	16.3	16.2	18	18	16.5	15.6	12	12	14.7	13.1	16.3	16.2	18	18
	Wbl	Bike Lane Width	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
	Ipk	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Wos	Shoulder Width (no curb)	0.8	4.4	0.9	1	0.2	1	0	0.3	0	0	0.8	4.4	0.9	1	0.2	1	0	0.3	0	0	0.8	4.4	0.9	1	0.2	1	0	0.3	0	0	0.8	4.4	0.9	1	0.2	1	0	0.3	0	0
	Fv	Fv = .0066*(vlt+vth+vrt)/(4*Nth)	0.66	0.76	0.61	0.64	0.52	0.55	0.58	0.54	0.46	0.51	0.68	0.78	0.62	0.66	0.53	0.57	0.60	0.56	0.48	0.54	0.71	0.81	0.65	0.69	0.56	0.59	0.63	0.58	0.49	0.55	0.72	0.83	0.66	0.71	0.57	0.61	0.64	0.60	0.51	0.58
	vlt	Left-Turn Demand Flow Rate	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
	vth	Through Demand Flow Rate	401	459	367	390	314	336	354	326	278	310	410	471	376	402	323	348	363	338	292	327	430	492	394	418	337	360	380	350	298	333	439	504	403	430	346	372	389	362	312	350
	vrt	Right-Turn Demand Flow Rate	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
	Nth	Number of Through Lanes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	Ib,link	Ib,link = .760+Fw+Fv+Fs+Fp	2.95	2.54	3.55	3.55	3.23	3.34	3.03	2.96	2.65	2.71	2.96	2.55	3.56	3.56	3.25	3.36	3.04	2.98	2.67	2.74	2.98	2.57	3.58	3.58	3.27	3.37	3.07	3.00	2.68	2.75	2.99	2.59	3.60	3.60	3.28	3.39	3.08	3.01	2.71	2.78
	Fw	Fw = -.005*We^2	-1.50	-2.00	-0.83	-0.85	-1.11	-0.99	-1.33	-1.36	-1.62	-1.62	-1.50	-2.00	-0.83	-0.85	-1.11	-0.99	-1.33	-1.36	-1.62	-1.62	-1.50	-2.00	-0.83	-0.85	-1.11	-0.99	-1.33	-1.36	-1.62	-1.62	-1.50	-2.00	-0.83	-0.85	-1.11	-0.99	-1.33	-1.36	-1.62	-1.62
	We	We = Wv = Wt = Wol+Wbl+Wos	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18	17.3	20	12.9	13	14.9	14.1	16.3	16.5	18	18
	ppk	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
	Fv	Fv = .507*ln(vma/(4Nth))	2.40	2.50	2.33	2.36	2.29	2.29	2.31	2.28	2.23	2.29	2.41	2.51	2.34	2.37	2.31	2.31	2.32	2.30	2.25	2.32	2.43	2.53	2.36	2.39	2.33	2.32	2.35	2.32	2.26	2.33	2.44	2.55	2.38	2.41	2.34	2.34	2.36	2.33	2.29	2.36
	vma	vma = vm	451	553	395	419	369	365	381	358	323	369	461	567	404	432	380	378	390	371	340	389	483	593	424	449	396	391	409	385	347	396	493	607	433	462	407	404	418	398	363	417
	vm	vm = V/PHF	451	553	395	419	369	365	381	358	323	369	461	567	404	432	380	378	390	371	340	389	483	593	424	449	396	391	409	385	347	396	493	607	433	462	407	404	418	398	363	417
	PHF	Peak Hour Factor	0.89	0.83	0.93	0.93	0.85	0.92	0.93	0.91	0.86	0.84	0.89	0.83	0.93	0.93	0.85	0.92	0.93	0.91	0.86	0.84	0.89	0.83	0.93	0.93	0.85	0.92	0.93	0.91	0.86	0.84	0.89	0.83	0.93	0.93	0.85	0.92	0.93	0.91	0.86	0.84
	Nth	Number of Through Lanes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Fs	Fs = .199*[1.1199ln(SRa-20)+.8103](1+.1038*PHVa)^2	0.85	0.84	0.85	0.84	0.85	0.84	0.85	0.84	0.84	0.84	0.85	0.84	0.85	0.84	0.85	0.84	0.85	0.84	0.84	0.84	0.85	0.84	0.85	0.84	0.85	0.84	0.85	0.84	0.84	0.84	0.85	0.84	0.85	0.84	0.85	0.84	0.85	0.84	0.84	0.84
	SRa	SRa = SR	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	SR	SR = Vehicle Speed	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	PHVa	PHV	0.102	0.045	0.102	0.045	0.102	0.045	0.102	0.045	0.075	0.053	0.102	0.045	0.102	0.045	0.102	0.045	0.102	0.045	0.075	0.053	0.102	0.045	0.102	0.045	0.102	0.045	0.102	0.045	0.075	0.053	0.102	0.045	0.102	0.045	0.102	0.045	0.102	0.045	0.075	0.053
	PHVa	Percent Heavy Vehicle (<50%)	0.102	0.045	0.102	0.045	0.102	0.045	0.102	0.045	0.075	0.053	0.102	0.045	0.102	0.045	0.102	0.045	0.102	0.045	0.075	0.053	0.102	0.045	0.102	0.045	0.102	0.045	0.102	0.045	0.075	0.053	0.102	0.045	0.102	0.045	0.102	0.045	0.102	0.045	0.075	0.053
	Fp	Fp = 7.066/Pc^2	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
	Pc	Pavement Condition Rating	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
6	LOSlink	Link LOS	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
7	Ib,seg	Ib,seg = .160*Ib,link+.011*Fbi*e^Ib,int+.035*(Nap,s/(L/5280))+2.85	3.63	3.45	3.53	3.53	3.64	3.69	4.69	4.76	3.77	3.36	3.63	3.45	3.53	3.53	3.65	3.70	4.69	4.76	3.77	3.37	3.63	3.46	3.54	3.54	3.65	3.70	4.70	4.77	3.77	3.37	3.64	3.46	3.54	3.55	3.66	3.71	4.70	4.77	3.78	3.38
	Fbi	Fbi = 0.0	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1
		Fbi = 1.0																																								
	Nap,s	# Access Points on right side (direction of travel)	4	3	0	0	3	5	9	10	9	1	4	3	0	0	3	5	9	10	9	1	4	3	0	0	3	5	9	10	9	1	4	3	0	0	3	5	9	10	9	1
8	LOSseg	Segment LOS	D	C	D	D	D	D	E	E	D	C	D	C	D	D	D	D	E	E	D	C	D	C	D	D	D	D	E	E	D	C	D	C	D	D	D	D	E	E	D	C

Appendix H CHP SWITRS COLLISION HISTORY

TOWN OF DANVILLE COLLISION REPORT
CORRIDOR: DIABLO ROAD
SEGMENT: GREEN VALLEY RD TO MT. DIABLO SCENIC
DATE RANGE: 01/01/05 - 12/31/17
COLLISION DATA: ISWITRS/CROSSROADS

CASE or REPORT ID	DATE	TIME	STREET 1	STREET 2	COLL TYPE	INVOLVED WITH	PED ACTION	INJURY	VEH 1 VIOL	VEH 2 VIOL	VEH 1 TYPE	VEH 2 TYPE	DIR FROM INT	DISTANCE (FT)
NA	1/22/2005	1:25	DIABLO RD	ALAMEDA DIABLO	Overturn	Fixed Object	No ped involved	0	23152A/DUI	Not stated	Jeep	Not stated		
NA	1/26/2005	7:10	DIABLO RD	AVENIDA NUEVA	Head on	Other vehicle	No ped involved	2	21650/wrong side	Not stated	car	car		
NA	2/7/2005	6:48	GREEN VALLEY RD	DIABLO RD	Sideswipe	Other vehicle	No ped involved	0	22350	Not stated	car	car		
NA	2/19/2005	9:25	DIABLO RD	GREEN VALLEY RD	Hit object	Fixed object	No ped involved	0	23152A/DUI	Not stated	car	Not stated		
NA	5/20/2005	16:40	DIABLO RD	ALAMEDA DIABLO	Broadside	Other vehicle	No ped involved	2	21650/wrong side	Not stated	car	car		
NA	6/25/2005	15:04	DIABLO RD	ALAMEDA DIABLO	Broadside	Other vehicle	No ped involved	1	21802A/ROW	Not stated	car	car		
2169790	8/16/2005	21:40	DIABLO RD	ALAMEDA DIABLO	Head on	Other vehicle	No ped involved	0	Wrong side	Not stated	Not stated	Not stated		
2303265	10/27/2005	9:35	DIABLO RD	GREEN VALLEY RD	Hit object	Other vehicle	No ped involved	0	22350/unsafe speed	Not stated	car	Not stated		
NA	12/23/2005	17:17	GREEN VALLEY RD	DIABLO RD	Rear end	Other vehicle	No ped involved	0	21703	Not stated	car	car		
2434210	12/27/2005	21:44	DIABLO RD	ALAMEDA DIABLO	Head on	Fixed object	No ped involved	1	Unsafe speed	Not stated	Car	Not stated		
06-03846	2/13/2006	12:44	CLYDESDALE DR	DIABLO RD	Rear end	Bicycle	No ped involved	1	Not stated	Not stated	Car	Bicycle		
06-04125	2/14/2006	7:20	DIABLO RD	CLYDESDALE DR	Broadside	Other vehicle	No ped involved	0	21801A/ROW	Not stated	Not stated	Not stated		
06-04986	2/22/2006	15:30	DIABLO RD	CLYDESDALE DR	Rear end	Other vehicle	No ped involved	0	22350/unsafe speed	Not stated	Not stated	car		
2507524	3/1/2006	5:30	BLACKHAWK RD	MT DIABLO SCENIC	Hit object	Other object	No ped involved	0	21560/wrong side	Not stated	Not stated	Not stated	(CCC)	
06-14274	6/2/2006	15:33	DIABLO RD	CLYDESDALE DR	Rear end	Other vehicle	No ped involved	0	22350/unsafe speed	Not stated	car	car		
06-15253	6/12/2006	18:58	DIABLO RD	CLYDESDALE DR	Rear end	Other vehicle	No ped involved	1	Hit & Run/DUI	Not stated	car	car		
06-16628	6/26/2006	10:43	DIABLO RD	MCCAULEY RD	Other CollType	Other vehicle	No ped involved	0	Not stated	Not stated	Not stated	Not stated		
NA	9/30/2006	20:10	DIABLO RD	AVENIDA NUEVA	Hit object	Fixed object	No ped involved	0	22107	Not stated	Not stated	Not stated		
06-27318	10/19/2006	13:15	DIABLO RD	CLYDESDALE DR	Rear end	Other vehicle	No ped involved	1	Not stated	Not stated	Other bus	Car		
06-32316	12/12/2006	16:17	GREEN VALLEY RD	DIABLO RD	Broadside	Other vehicle	No ped involved	0	22350/unsafe speed	Not stated	Not stated	Not stated		
3390896	9/17/2007	18:00	DIABLO RD	GREEN VALLEY RD	Other CollType	Other vehicle	No ped involved	0	22106/backing	Not stated	car	car		
07-23958	9/18/2007	15:03	DIABLO RD	CLYDESDALE DR	Rear end	Other vehicle	No ped involved	1	22350/unsafe speed	Not stated	Not stated	Car		
07-28509	11/16/2007	6:50	DIABLO RD	ALAMEDA DIABLO	Hit object	Fixed object	No ped involved	0	Not stated	Not stated	Car	Not stated		
07-28609	12/16/2007	1:00	DIABLO RD	ALAMEDA DIABLO	Head on	Fixed object	No ped involved	0	Not stated	Not stated	Not stated	Not stated		
08-08883	4/21/2008	14:35	DIABLO RD	FAIRWAY DR	Rear end	Other vehicle	No ped involved	0	22350/unsafe speed	Not stated	Not stated	Car		
08-12987	6/10/2008	8:28	GREEN VALLEY RD	DIABLO RD	Rear end	Other vehicle	No ped involved	0	Not stated	Not stated	Not stated	Not stated	North	150
08-22483	10/5/2008	11:31	DIABLO RD	ALAMEDA DIABLO	Hit object	Bicycle	No ped involved	1	22350/unsafe speed	Not stated	Bicycle	Not stated		
08-23150	10/13/2008	15:26	DIABLO RD	CALLE ARROYO	Other vehicle	Bicycle	No ped involved	1	21656/21750	Not stated	car	Bicycle		
08-23909	10/22/2008	15:55	DIABLO RD	GREEN VALLEY RD	Rear end	Other vehicle	No ped involved	0	Not stated	Not stated	Car	Not stated	West	150
08-29148	12/31/2008	17:42	DIABLO RD	GREEN VALLEY RD	Broadside	Other vehicle	No ped involved	0	Not stated	Not stated	Pickup	Not stated	West	206
09-00965	1/14/2009	8:21	DIABLO RD	CLYDESDALE DR	Rear end	Other vehicle	No ped involved	0	Not stated	Not stated	Not stated	Bicycle		
09-01490	1/21/2009	14:51	DIABLO RD	GREEN VALLEY RD	Broadside	Other vehicle	No ped involved	0	Not stated	Not stated	Not stated	Not stated	West	102
09-05349	3/22/2009	3:30	DIABLO RD	CLYDESDALE DR	Hit Object	Fixed Object	No ped involved	1	21650	Not stated	car	Not stated		
09-06424	4/7/2009	13:25	DIABLO RD	AVENIDA NUEVA	Hit object	Fixed object	No ped involved	0	Improper turning (veh)	Not stated	Pickup	Not stated		
09-19504	10/21/2009	17:44	DIABLO RD	GREEN VALLEY RD	Broadside	Bicycle	No ped involved	0	Not stated	Not stated	Car	Bicycle		
09-21606	11/20/2009	21:30	DIABLO RD	MCCAULEY RD	Hit object	Fixed object	No ped involved	0	Not stated	Not stated	Not stated	Not stated		
09-23538	12/21/2009	2:30	DIABLO RD	GREEN VALLEY RD	Hit object	Fixed object	No ped involved	0	Not stated	Not stated	Car	Not stated		
10-04009	3/3/2010	12:06	DIABLO RD	GREEN VALLEY RD	Head on	Other vehicle	No ped involved	0	Not stated	Not stated	Not stated	Not stated	West	74
10-06042	4/2/2010	8:34	DIABLO RD	MCCAULEY RD	Broadside	Bicycle	No ped involved	1	Wrong side	Not stated	Bicycle	Not stated	West	191
10-14037	7/30/2010	12:49	DIABLO RD	CLYDESDALE DR	Rear end	Other vehicle	No ped involved	2	22350/unsafe speed	Not stated	car	car		
NA	5/9/2011	21:10	DIABLO RD	ALAMEDA DIABLO	Hit Object	Fixed Object	No ped involved	0	22350	Not stated	Not stated	Not stated		
11-10432	6/13/2011	12:10	DIABLO RD	CLYDESDALE DR	Sideswipe	Other vehicle	No ped involved	0	21801a/ROW auto	Not stated	car	car		
11-13271	7/27/2011	16:07	DIABLO RD	CALLE ARROYO	Rear end	Other vehicle	No ped involved	0	22350/unsafe speed	Not stated	car	Not stated		
NA	7/28/2011	9:29	DIABLO RD	AVENIDA NUEVA	Rear End	Other vehicle	No ped involved	0	Not stated	Not stated	Not stated	Not stated		
11-21130	12/5/2011	7:46	DIABLO RD	AVENIDA NUEVA	Sideswipe	Fixed Object	No ped involved	0	22107/Improper turn	Not stated	car	Not stated		
11-22128	12/22/2011	0:01	DIABLO RD	ALAMEDA DIABLO	Hit Object	Fixed Object	No ped involved	0	23152/DUI	Not stated	Not stated	Not stated		
12-08088	5/15/2012	14:11	DIABLO RD	CLYDESDALE DR	Not stated	Other vehicle	No ped involved	0	22350	Not stated	Not stated	Not stated		
NA	8/6/2012	17:30	DIABLO RD	CLYDESDALE DR	Rear end	Other vehicle	No ped involved	1	22350/unsafe speed	Not stated	Jeep	car		
12-20011	11/26/2012	14:25	DIABLO RD	CALLE ARROYO	Not stated	Other vehicle	No ped involved	0	22350	Not stated	Not stated	Not stated		
13-04482	3/19/2013	13:55	DIABLO RD	ALAMEDA DIABLO	DUI	Not stated	No ped involved		23152a/22107/DUI	Not stated	Not stated	Not stated		
13-12616	7/20/2013	19:14	DIABLO RD	GREEN VALLEY RD	Not stated	Not stated	No ped involved		21650	Not stated	Not stated	Not stated		
13-12832	7/24/2013	12:49	DIABLO RD	CLYDESDALE DR	Not stated	Not stated	No ped involved		22107	Not stated	Not stated	Not stated		
14-00398	1/7/2014	15:40	DIABLO RD	CLYDESDALE DR	Broadside	Other vehicle	No ped involved	1	21801A	Not stated	car	car		
14-01647	1/28/2014	18:05	DIABLO RD	FAIRWAY DR					22350	Not stated	Not stated	Not stated		
14-05088	3/24/2014	13:14	DIABLO RD	CLYDESDALE DR	Sideswipe	Bicycle	No ped involved	1	21750/Improper pass	Not stated	car	Bicycle		
14-07130	4/26/2014	20:18	DIABLO RD	1941 DIABLO RD	22350	Not stated	No ped inv	0	22350	Not stated	Not Stated	Not stated	South of 1941	143
14-13698	8/11/2014	17:54	DIABLO RD	AVENIDA NUEVA	21650	Not stated	No ped inv	1	21650	Not stated	Not Stated	Not stated	West	.8 (miles)
15-03485	2/28/2015	14:06	DIABLO RD	MCCAULEY RD	22350	Other vehicle	No ped inv	0	22350	Not stated	Not Stated	Not stated	East	382
Not Stated	3/14/2015	9:30	DIABLO RD	ALAMEDA DIABLO	Wrong side	Bicycle	No ped inv	1	21650	Not stated	Vehicle	Bicycle	West	0
15-05937	4/9/2015	15:10	DIABLO RD	CLYDESDALE DR	22107	Bicycle	No ped inv	1	22107	Not stated	Not Stated	Bicycle	West	15
15-08050	5/15/2015	19:42	DIABLO RD	AVENIDA NUEVA	22107	Not stated	No ped inv	0	22107	Not stated	Not Stated	Not stated	Not stated	0
15-11409	5/16/2015	19:54	DIABLO RD	ALAMEDA DIABLO	22350	Not stated	No ped inv	0	22350	Not stated	Not Stated	Not stated	East	Not stated
15-10719	6/29/2015	13:22	DIABLO RD	CALLE ARROYO	22350	Other vehicle	No ped inv	0	22350	Not stated	Not Stated	Not stated	Not stated	0
15-13428	8/15/2015	20:54	DIABLO RD	GREEN VALLEY RD	Medical	Other vehicle	No ped inv	1	Medical	Not stated	Not Stated	Not stated	Not stated	0
15-17049	10/16/2015	NA	GREEN VALLEY RD	DIABLO RD	DUI	PDO	No ped inv	0	22350	Not stated	Not stated	Not Stated	Not stated	0
15-18802	11/18/2015	7:35	DIABLO RD	GREEN VALLEY RD	22350	Other vehicle	No ped inv	0	22350	Not stated	Not stated	Not stated	East	433
15-19413	11/30/2015	12:07	DIABLO RD	ALAMEDA DIABLO	22107	Other vehicle	No ped inv	0	22107	Not stated	Not stated	Not stated	Not stated	Not stated
16-02525	2/17/2016	NA	DIABLO RD	MT DIABLO SCENIC	22350	Other vehicle	No ped inv	0	22350	Not stated	Not stated	Not stated	West	24
16-02651	2/19/2016		DIABLO RD	MCCAULEY RD	Unsafe speed	Other vehicle	No ped inv	0	22350	Not stated	Not stated	Not stated	Not stated	0
16-06698	5/6/2016	12:26	DIABLO RD	GREEN VALLEY RD	22350	Other vehicle	No ped inv	0	22350	Not stated	Not stated	Not stated	Not stated	0
16-07958	6/2/2016	17:13	DIABLO RD	1956 DIABLO RD	22350	Other vehicle	No ped inv	0	22350	Not stated	Not stated	Not stated	East	15
16-10942	8/5/2016	12:27	DIABLO RD	ALAMEDA DIABLO	Improper turn	Other vehicle	No ped inv	0	22350	Not stated	Not stated	Not stated	East	513
16-16903	12/6/2016	13:09	DIABLO RD	HARTZ AVE	ROW violation	Other vehicle	No ped inv	0	21800a	Not stated	Not stated	Not stated	West	412
17-00752	1/20/2017	11:14	DIABLO RD	FAIRWAY DR	Unsafe speed	Other vehicle	No ped inv	1	22350	Not stated	Not stated	Not stated	West	57
17-01467	2/3/2017	14:45	DIABLO RD	CALLE ARROYO	Unsafe speed	Other vehicle	No ped inv	0	22350	Not stated	Not stated	Not stated	Not stated	0
17-03181	3/12/2017	19:28	DIABLO RD	AVENIDA NUEVA	Improper turn	Other vehicle	No ped inv	0	22107	Not stated	Not stated	Not stated	East	842
17-9170	7/16/2017	18:17	DIABLO RD	CLYDESDALE DR	Head on	Other Vehicle	No ped inv	3	23152A/DUI	Not stated	Pickup	SUV	Not stated	0
17-10256	8/7/2017	17:30	DIABLO RD	GREEN VALLEY RD	Improper turn	Fixed Object	No ped inv	0	22107	Not stated	Pass veh	Not stated	Not stated	0
17-13855	10/21/2017	13:25	DIABLO RD	AVENIDA NUEVA	Unsafe speed	Bicycle	No ped inv	1	22350	Not stated	Pass veh	Bicycle	East	27
17-13751	10/21/2017	14:00	DIABLO RD	CLYDESDALE DR	Unsafe speed	Bicycle (2)	No ped inv	2	22350	Not stated	Pass veh	Bicycle (2)	West	769

Indicates Bicycle Involved

Appendix I PEAK HOUR TRAFFIC SIGNAL WARRANT ANALYSES

Existing Conditions

Califronia MUTCD 2014 Edition

Existing Conditions: AM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 1 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Green Valley Road** Critical Approach Speed 25 m/h

Minor St: **Stone Valley Road** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☐

In built up area of isolated community of < 10,000 population …….. ☐

or } RURAL (R)

☑ URBAN (U)

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☑ **NO** ☐

(All parts, 1, 2 and 3 below must be satisfied)

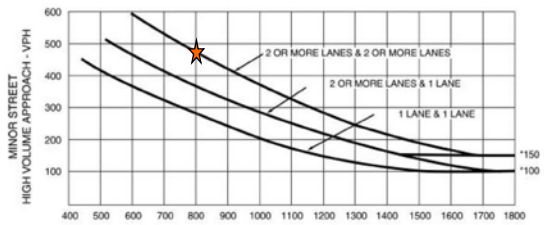
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☑ No ☐
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	8:00 a.m.				Hour
Both Approaches - Major Street		X	804				
Highest Approaches - Minor Street		X	487				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Existing Conditions: School PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 2 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Green Valley Road** Critical Approach Speed 25 m/h

Minor St: **Stone Valley Road** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☐

In built up area of isolated community of < 10,000 population …….. ☐

or } RURAL (R)

☑ URBAN (U)

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☑ **NO** ☐

(All parts, 1, 2 and 3 below must be satisfied)

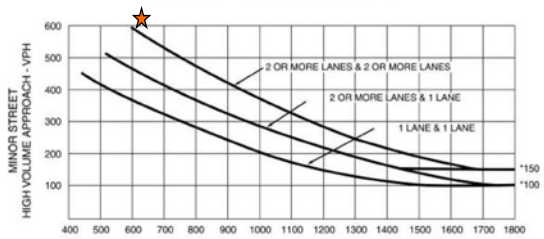
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☑ No ☐
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	8:00 a.m.				Hour
Both Approaches - Major Street		X	639				
Highest Approaches - Minor Street		X	636				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Existing Conditions: PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 3 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Green Valley Road** Critical Approach Speed 25 m/h

Minor St: **Stone Valley Road** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☐ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U) ☑

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☑ **NO** ☐

(All parts, 1, 2 and 3 below must be satisfied)

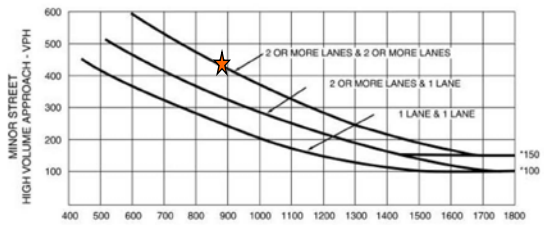
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☑ No ☐
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	4:45 p.m.				Hour
Both Approaches - Major Street		X	885				
Highest Approaches - Minor Street		X	438				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) falls above the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Existing Conditions: AM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 1 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Diablo Road/Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Mt. Diablo Scenic Boulevard** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☑ or } RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

☐

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☐ **NO** ☑

PART A **SATISFIED** **YES** ☐ **NO** ☑

(All parts, 1, 2 and 3 below must be satisfied)

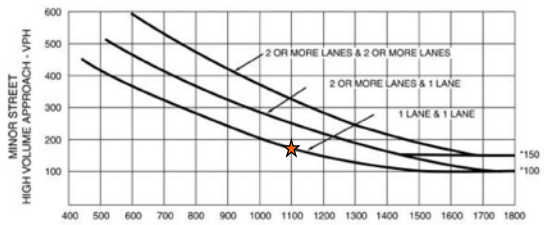
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	8:00 a.m.				Hour
Both Approaches - Major Street	X		1100				
Highest Approaches - Minor Street	X		175				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Existing Conditions: School PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 2 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Diablo Road/Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Mt. Diablo Scenic Boulevard** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☑ or } RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

☐

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☑ **NO** ☐

(All parts, 1, 2 and 3 below must be satisfied)

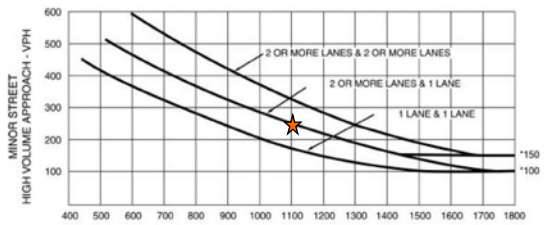
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☑ No ☐
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	2:00 p.m.				Hour
Both Approaches - Major Street	X		1113				
Highest Approaches - Minor Street	X		251				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



MAJOR STREET—TOTAL OF BOTH APPROACHES—
VEHICLES PER HOUR (VPH)

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Existing Conditions: PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 3 of 3)

DIST	CO (Contra Costa)	RTE	KPM

CALC CH DATE 8/29/2017

CHK DATE

Major St: **Diablo Road/Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Mt. Diablo Scenic Boulevard** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☐

In built up area of isolated community of < 10,000 population …….. ☐

or } RURAL (R)

☑ URBAN (U)

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☐ **NO** ☑

PART A **SATISFIED** **YES** ☐ **NO** ☑

(All parts, 1, 2 and 3 below must be satisfied)

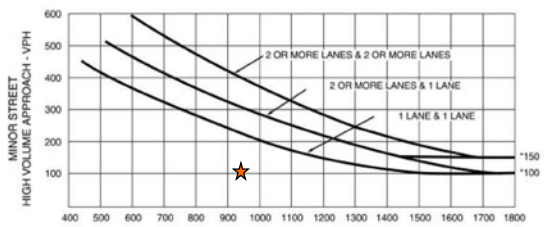
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☐ **NO** ☑

APPROACH LANES	One	2 or More	4:00 p.m.				Hour
Both Approaches - Major Street	X		940				
Highest Approaches - Minor Street	X		107				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) falls above the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Existing plus Project Conditions

Califronia MUTCD 2014 Edition

Existing plus Project Conditions: AM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 1 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Green Valley Road** Critical Approach Speed 25 m/h

Minor St: **Stone Valley Road** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☐

In built up area of isolated community of < 10,000 population …….. ☐

or } RURAL (R)

☑ URBAN (U)

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☑ **NO** ☐

(All parts, 1, 2 and 3 below must be satisfied)

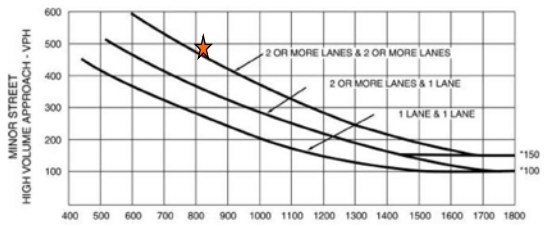
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☑ No ☐
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	8:00 a.m.				Hour
Both Approaches - Major Street		X	824				
Highest Approaches - Minor Street		X	497				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Existing plus Project Conditions: School PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 2 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Green Valley Road** Critical Approach Speed 25 m/h

Minor St: **Stone Valley Road** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☐

In built up area of isolated community of < 10,000 population …….. ☐

or } RURAL (R)

☑ URBAN (U)

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☑ **NO** ☐

(All parts, 1, 2 and 3 below must be satisfied)

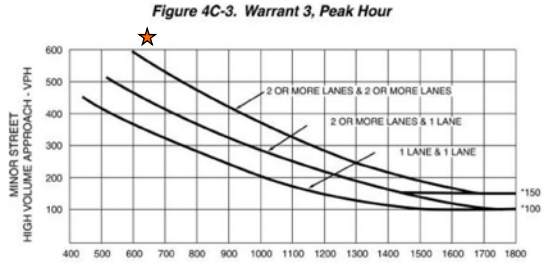
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☑ No ☐
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	8:00 a.m.				Hour
Both Approaches - Major Street		X	650				
Highest Approaches - Minor Street		X	652				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



MAJOR STREET—TOTAL OF BOTH APPROACHES—VEHICLES PER HOUR (VPH)

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Existing plus Project Conditions: PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 3 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Green Valley Road** Critical Approach Speed 25 m/h

Minor St: **Stone Valley Road** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☐ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U) ☑

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☑ **NO** ☐

(All parts, 1, 2 and 3 below must be satisfied)

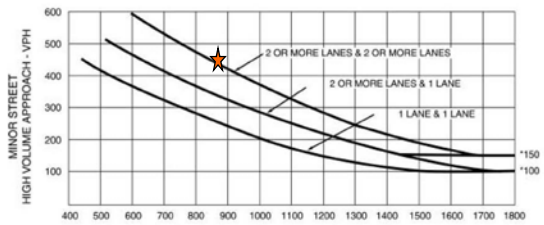
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☑ No ☐
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	4:45 p.m.				Hour
Both Approaches - Major Street		X	892				
Highest Approaches - Minor Street		X	449				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) falls above the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Existing plus Project Conditions: AM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 1 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Diablo Road/Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Mt. Diablo Scenic Boulevard** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☑ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

☐

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☐ **NO** ☑

(All parts, 1, 2 and 3 below must be satisfied)

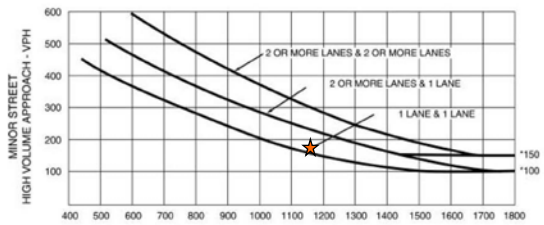
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	8:00 a.m.				Hour
Both Approaches - Major Street	X		1161				
Highest Approaches - Minor Street	X		175				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Existing plus Project Conditions: School PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 2 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Diablo Road/Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Mt. Diablo Scenic Boulevard** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☑ or } RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

☐

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☑ **NO** ☐

(All parts, 1, 2 and 3 below must be satisfied)

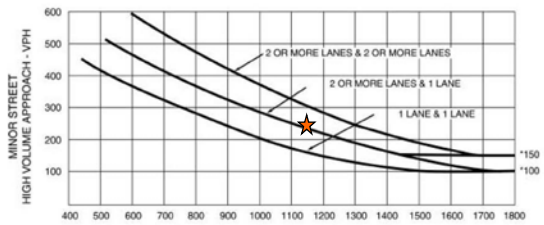
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☑ No ☐
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	2:00 p.m.				Hour
Both Approaches - Major Street	X		1164				
Highest Approaches - Minor Street	X		251				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Existing plus Project Conditions: PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 3 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Diablo Road/Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Mt. Diablo Scenic Boulevard** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☐ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

☑

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☐ **NO** ☑

PART A **SATISFIED** **YES** ☐ **NO** ☑

(All parts, 1, 2 and 3 below must be satisfied)

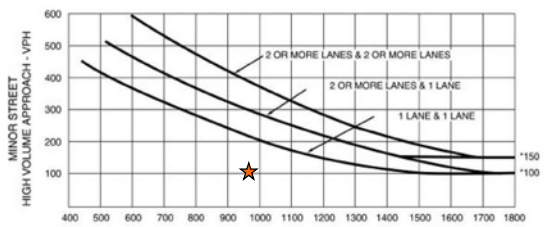
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☐ **NO** ☑

APPROACH LANES	One	2 or More	4:00 p.m.				Hour
Both Approaches - Major Street	X		986				
Highest Approaches - Minor Street	X		107				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) falls above the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Cumulative Conditions

Califronia MUTCD 2014 Edition

Cumulative Conditions: AM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 1 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Green Valley Road** Critical Approach Speed 25 m/h

Minor St: **Stone Valley Road** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☐

In built up area of isolated community of < 10,000 population …….. ☐

or } RURAL (R)

☑ URBAN (U)

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☑ **NO** ☐

(All parts, 1, 2 and 3 below must be satisfied)

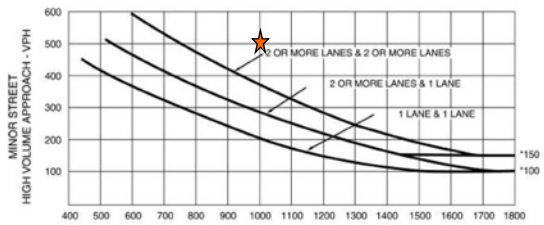
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☑ No ☐
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	8:00 a.m.				Hour
Both Approaches - Major Street		X	1014				
Highest Approaches - Minor Street		X	500				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative Conditions: School PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 2 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Green Valley Road** Critical Approach Speed 25 m/h

Minor St: **Stone Valley Road** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☐

In built up area of isolated community of < 10,000 population …….. ☐

or } RURAL (R)

☑ URBAN (U)

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☑ **NO** ☐

(All parts, 1, 2 and 3 below must be satisfied)

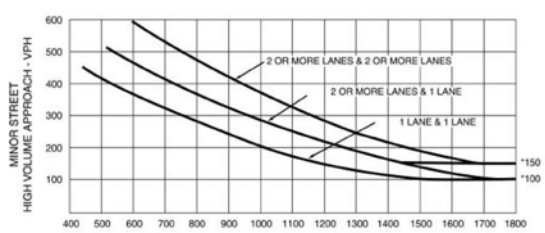
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☑ No ☐
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	8:00 a.m.				Hour
Both Approaches - Major Street		X	723				
Highest Approaches - Minor Street		X	792				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative Conditions: PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 3 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Green Valley Road** Critical Approach Speed 25 m/h

Minor St: **Stone Valley Road** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☐

In built up area of isolated community of < 10,000 population …….. ☐

or } RURAL (R)

☑ URBAN (U)

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☑ **NO** ☐

(All parts, 1, 2 and 3 below must be satisfied)

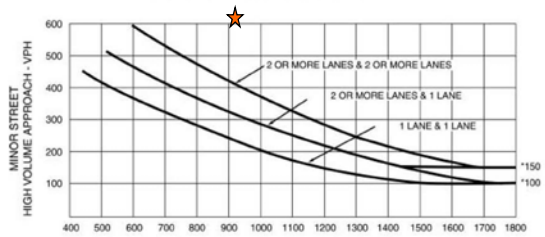
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☑ No ☐
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	4:45 p.m.				Hour
Both Approaches - Major Street		X	926				
Highest Approaches - Minor Street		X	621				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) falls above the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



MAJOR STREET—TOTAL OF BOTH APPROACHES—
VEHICLES PER HOUR (VPH)

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative Conditions: AM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 1 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Diablo Road/Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Mt. Diablo Scenic Boulevard** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☑ or } RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

☐

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☐ **NO** ☑

(All parts, 1, 2 and 3 below must be satisfied)

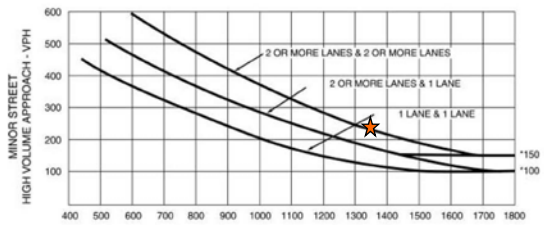
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	8:00 a.m.				Hour
Both Approaches - Major Street	X		1354				
Highest Approaches - Minor Street	X		242				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative Conditions: School PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 2 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Diablo Road/Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Mt. Diablo Scenic Boulevard** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☑ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

☐

WARRANT 3 - Peak Hours

PART A or PART B SATISFIED **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☑ **NO** ☐

(All parts, 1, 2 and 3 below must be satisfied)

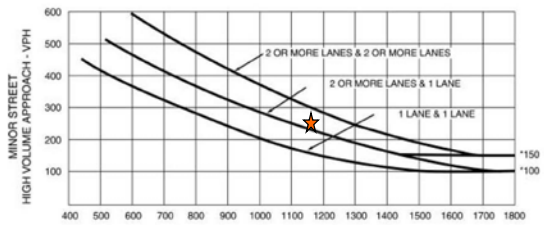
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☑ No ☐
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	2:00 p.m.				Hour
Both Approaches - Major Street	X		1174				
Highest Approaches - Minor Street	X		263				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative Conditions: PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 3 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Diablo Road/Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Mt. Diablo Scenic Boulevard** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☐ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

☑

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☐ **NO** ☑

(All parts, 1, 2 and 3 below must be satisfied)

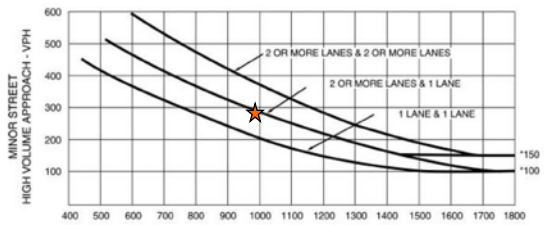
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	4:00 p.m.				Hour
Both Approaches - Major Street	X		993				
Highest Approaches - Minor Street	X		290				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) falls above the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative Conditions: AM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 1 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Magee Ranch Road/Hidden Oak Drive** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☑ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

☐

WARRANT 3 - Peak Hours

PART A or PART B SATISFIED **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☐ **NO** ☑

(All parts, 1, 2 and 3 below must be satisfied)

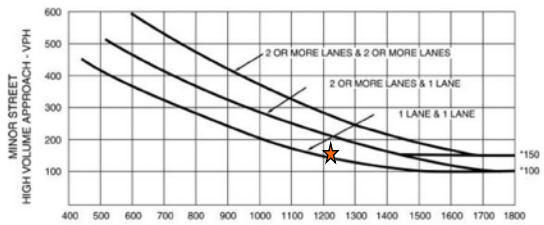
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☐ No ☑
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	8:00 a.m.				Hour
Both Approaches - Major Street	X		1222				
Highest Approaches - Minor Street	X		160				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



MAJOR STREET—TOTAL OF BOTH APPROACHES—
VEHICLES PER HOUR (VPH)

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative Conditions: School PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 2 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Magee Ranch Road/Hidden Oak Drive** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☑ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

☐

WARRANT 3 - Peak Hours

PART A or PART B SATISFIED YES ☐ NO ☑

PART A **SATISFIED** YES ☐ NO ☑

(All parts, 1, 2 and 3 below must be satisfied)

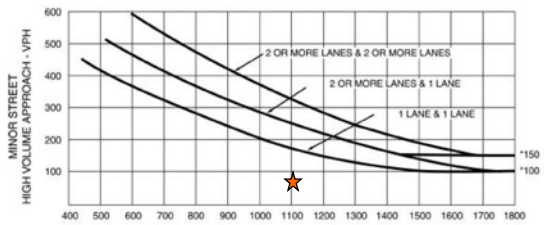
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☐ No ☑
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** YES ☐ NO ☑

APPROACH LANES	One	2 or More	2:00 p.m.				Hour
Both Approaches - Major Street	X		1116				
Highest Approaches - Minor Street	X		85				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



MAJOR STREET—TOTAL OF BOTH APPROACHES—
VEHICLES PER HOUR (VPH)

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative Conditions: PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 3 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Magee Ranch Road/Hidden Oak Drive** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☐ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

☑

WARRANT 3 - Peak Hours

PART A or PART B SATISFIED YES ☐ NO ☑

PART A **SATISFIED** YES ☐ NO ☑

(All parts, 1, 2 and 3 below must be satisfied)

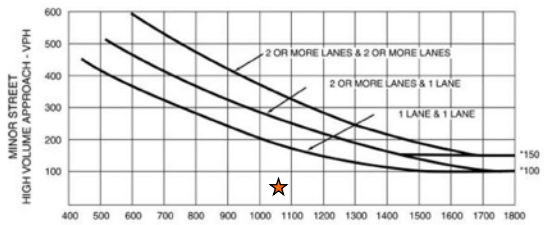
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☐ No ☑
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** YES ☐ NO ☑

APPROACH LANES	One	2 or More	4:00 p.m.				Hour
Both Approaches - Major Street	X		1073				
Highest Approaches - Minor Street	X		65				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) falls above the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative Conditions: AM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 1 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Blackhawk Drive** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☑ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

WARRANT 3 - Peak Hours

PART A or PART B SATISFIED YES ☐ NO ☑

PART A **SATISFIED** YES ☐ NO ☑

(All parts, 1, 2 and 3 below must be satisfied)

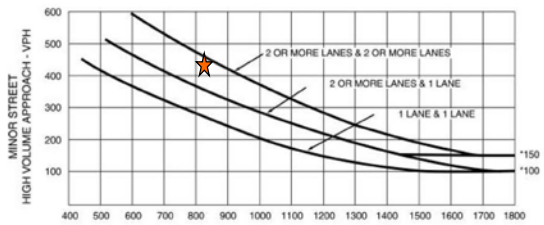
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** YES ☐ NO ☑

APPROACH LANES	One	2 or More	8:00 a.m.				Hour
Both Approaches - Major Street		X	824				
Highest Approaches - Minor Street		X	424				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative Conditions: School PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 2 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Blackhawk Drive** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☑ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

WARRANT 3 - Peak Hours

PART A or PART B SATISFIED **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☐ **NO** ☑

(All parts, 1, 2 and 3 below must be satisfied)

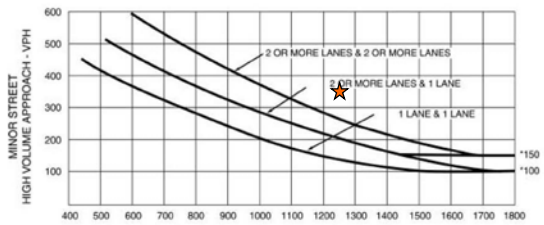
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	2:00 p.m.				Hour
Both Approaches - Major Street		X	1256				
Highest Approaches - Minor Street		X	355				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative Conditions: PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 3 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Blackhawk Drive** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☐

In built up area of isolated community of < 10,000 population …….. ☐

or } RURAL (R)

☑ URBAN (U)

WARRANT 3 - Peak Hours

PART A or PART B SATISFIED **YES** ☐ **NO** ☑

PART A **SATISFIED** **YES** ☐ **NO** ☑

(All parts, 1, 2 and 3 below must be satisfied)

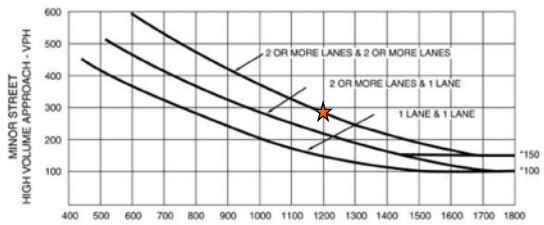
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☐ No ☑
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	4:00 p.m.				Hour
Both Approaches - Major Street		X	1205				
Highest Approaches - Minor Street		X	289				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) falls above the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Cumulative plus Project Conditions

Califronia MUTCD 2014 Edition

Cumulative plus Project Conditions: AM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 1 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Green Valley Road** Critical Approach Speed 25 m/h

Minor St: **Stone Valley Road** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☐

In built up area of isolated community of < 10,000 population …….. ☐

or } RURAL (R)

☑ URBAN (U)

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☑ **NO** ☐

(All parts, 1, 2 and 3 below must be satisfied)

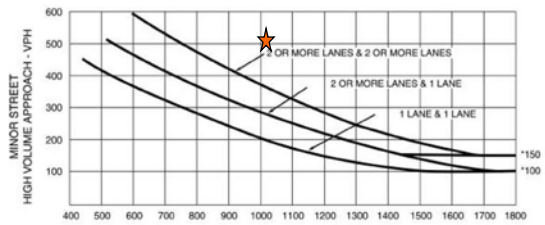
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☑ No ☐
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	8:00 a.m.				Hour
Both Approaches - Major Street		X	1034				
Highest Approaches - Minor Street		X	510				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative plus Project Conditions: School PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 2 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/27/2017
CHK DATE

Major St: **Green Valley Road** Critical Approach Speed 25 m/h

Minor St: **Stone Valley Road** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☐ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U) ☑

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☑ **NO** ☐

(All parts, 1, 2 and 3 below must be satisfied)

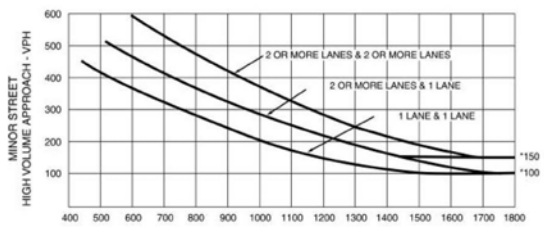
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☑ No ☐
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	8:00 a.m.				Hour
Both Approaches - Major Street		X	734				
Highest Approaches - Minor Street		X	808				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative plus Project Conditions: PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 3 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Green Valley Road** Critical Approach Speed 25 m/h

Minor St: **Stone Valley Road** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☐

In built up area of isolated community of < 10,000 population …….. ☐

or } RURAL (R)

☑ URBAN (U)

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☑ **NO** ☐

(All parts, 1, 2 and 3 below must be satisfied)

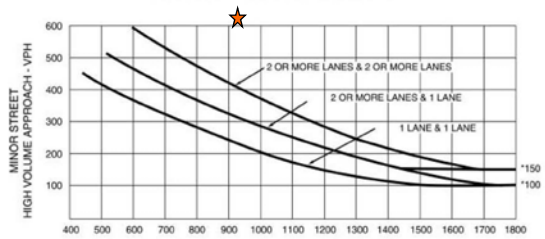
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☑ No ☐
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	4:45 p.m.				Hour
Both Approaches - Major Street		X	933				
Highest Approaches - Minor Street		X	632				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) falls above the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative plus Project Conditions: AM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 1 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Diablo Road/Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Mt. Diablo Scenic Boulevard** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☑ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

☐

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☐ **NO** ☑

(All parts, 1, 2 and 3 below must be satisfied)

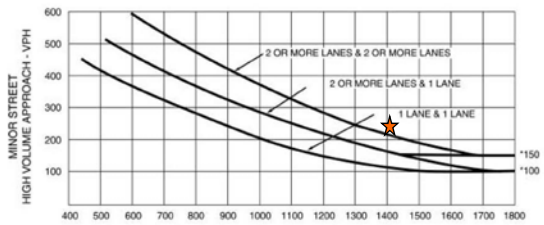
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	8:00 a.m.				Hour
Both Approaches - Major Street	X		1415				
Highest Approaches - Minor Street	X		242				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative plus Project Conditions: School PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 2 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Diablo Road/Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Mt. Diablo Scenic Boulevard** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☑ or } RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

☐

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☑ **NO** ☐

(All parts, 1, 2 and 3 below must be satisfied)

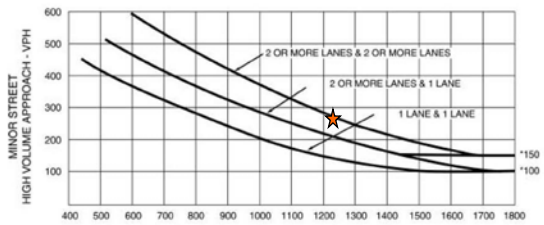
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☑ No ☐
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	2:00 p.m.				Hour
Both Approaches - Major Street	X		1225				
Highest Approaches - Minor Street	X		263				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative plus Project Conditions: PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 3 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Diablo Road/Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Mt. Diablo Scenic Boulevard** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☐ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☑ URBAN (U)

☑

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☐ **NO** ☑

(All parts, 1, 2 and 3 below must be satisfied)

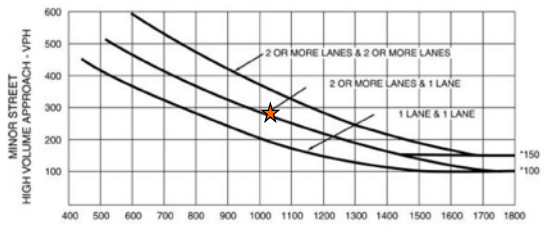
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	4:00 p.m.				Hour
Both Approaches - Major Street	X		1037				
Highest Approaches - Minor Street	X		290				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) falls above the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



MAJOR STREET—TOTAL OF BOTH APPROACHES—
VEHICLES PER HOUR (VPH)

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative plus Project Conditions: AM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 1 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Magee Ranch Road/Hidden Oak Drive** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☑ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

☐

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☐ **NO** ☑

(All parts, 1, 2 and 3 below must be satisfied)

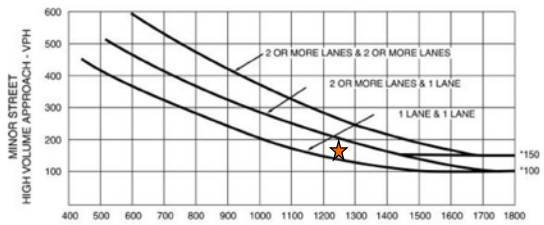
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☐ No ☑
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	8:00 a.m.				Hour
Both Approaches - Major Street	X		1256				
Highest Approaches - Minor Street	X		160				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative plus Project Conditions: School PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 2 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Magee Ranch Road/Hidden Oak Drive** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☑ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

☐

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☐ **NO** ☑

PART A **SATISFIED** **YES** ☐ **NO** ☑

(All parts, 1, 2 and 3 below must be satisfied)

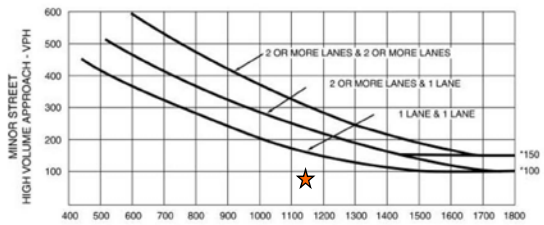
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☐ No ☑
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☐ **NO** ☑

APPROACH LANES	One	2 or More	2:00 p.m.				Hour
Both Approaches - Major Street	X		1148				
Highest Approaches - Minor Street	X		85				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



MAJOR STREET—TOTAL OF BOTH APPROACHES—
VEHICLES PER HOUR (VPH)

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative plus Project Conditions: PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 3 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Magee Ranch Road/Hidden Oak Drive** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☐ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

☑

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☐ **NO** ☑

PART A **SATISFIED** **YES** ☐ **NO** ☑

(All parts, 1, 2 and 3 below must be satisfied)

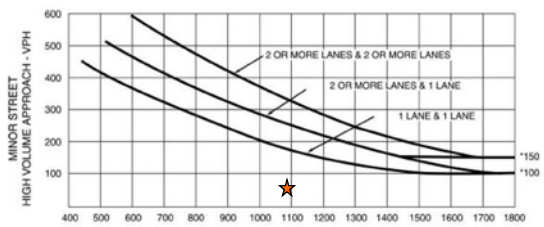
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☐ No ☑
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☐ **NO** ☑

APPROACH LANES	One	2 or More	4:00 p.m.				Hour
Both Approaches - Major Street	X		1097				
Highest Approaches - Minor Street	X		65				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) falls above the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



MAJOR STREET—TOTAL OF BOTH APPROACHES—VEHICLES PER HOUR (VPH)

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative plus Project Conditions: AM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 1 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Blackhawk Drive** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☑ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

☐

WARRANT 3 - Peak Hours **PART A or PART B SATISFIED** **YES** ☐ **NO** ☑

PART A **SATISFIED** **YES** ☐ **NO** ☑

(All parts, 1, 2 and 3 below must be satisfied)

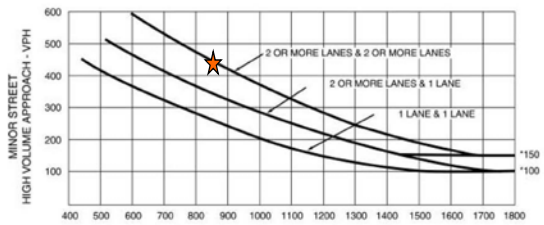
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☐ **NO** ☑

APPROACH LANES	One	2 or More	8:00 a.m.				Hour
Both Approaches - Major Street		X	858				
Highest Approaches - Minor Street		X	424				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative plus Project Conditions: School PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 2 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Blackhawk Drive** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☑ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

WARRANT 3 - Peak Hours

PART A or PART B SATISFIED **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☐ **NO** ☑

(All parts, 1, 2 and 3 below must be satisfied)

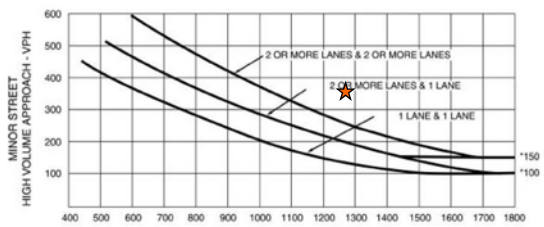
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	2:00 p.m.				Hour
Both Approaches - Major Street		X	1288				
Highest Approaches - Minor Street		X	355				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) fall below the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Califronia MUTCD 2014 Edition

Cumulative plus Project Conditions: PM Peak

Signal Warrant Analysis

Figure 4C-101. Traffic Signal Warrants Worksheet (Sheet 3 of 3)

DIST	CO	RTE	KPM
	Contra Costa		

CALC CH DATE 8/29/2017
CHK DATE

Major St: **Blackhawk Road** Critical Approach Speed 40 m/h

Minor St: **Blackhawk Drive** Critical Approach Speed 25 m/h

Critical speed of major street traffic > 64 km/h (40 mph)…… ☑ or RURAL (R)

In built up area of isolated community of < 10,000 population …….. ☐ URBAN (U)

☐

WARRANT 3 - Peak Hours

PART A or PART B SATISFIED **YES** ☑ **NO** ☐

PART A **SATISFIED** **YES** ☐ **NO** ☑

(All parts, 1, 2 and 3 below must be satisfied)

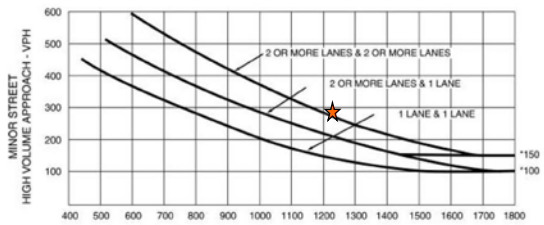
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND — Yes ☐ No ☑
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes: AND — Yes ☑ No ☐
3. The total entering volume services during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. — Yes ☑ No ☐

PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	4:00 p.m.				Hour
Both Approaches - Major Street		X	1229				
Highest Approaches - Minor Street		X	289				

The plotted point for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume vehicle minor street approach (one direction only) for one hour (any consecutive 15 minute intereval) falls above the applicable curve in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Appendix J DIABLO CUT-THROUGH SURVEY

Stantec conducted a license plate survey (origin-destination (O-D) survey) of vehicles travelling through the community of Diablo to determine the extent of cut-through traffic north of Diablo Road. The reported cut-through routes identified by the Town were from Diablo Road to Avenida Nueva to La Cadena to Alameda Diablo and back to Diablo Road in the westbound direction, and the reverse in the eastbound direction. Based on the pattern of existing cut-through traffic, Stantec analyzed the potential for the proposed project to generate additional cut-through trips along these roadways. It should be noted that this report section is provided for informational purposes and that the Town of Danville dos not consider cut-through traffic to constitute an independent environmental impact.

The survey was conducted during the AM, School PM, and PM peak periods on May 2, 2017. The survey was not conducted on the same day as turning movement counts were collected due to presence of a pothole that impacted typical traffic patterns. The survey was conducted once the pothole was repaired. License plate numbers were noted at the beginning and end of the cut-through roadway section. If the license plate number showed up at the beginning and end of the cut-through section within a 10-minute period, it was considered a cut-through vehicle. The survey data is summarized in **Table J.1**, and the results show that there are some cut-through vehicles north of Diablo Road and they represent less than 10 percent of total traffic on neighborhood streets. The following is a summary of the observed cut-through patterns:

- During the AM peak period, 6 of the 111 vehicles travelling westbound (5%) and 10 of the 143 vehicles travelling eastbound (7%) were identified as cut-through trips.
- During the School PM peak period, 16 of the 173 vehicles travelling westbound (10%) and 15 of the 157 vehicles travelling eastbound (9%) were identified as cut-through trips.
- During the PM peak period, 8 of the 152 vehicles travelling westbound (5%) and 10 of the 134 vehicles travelling eastbound (7%) were identified as cut-through trips.

Per the Town's Neighborhood Traffic Management Program (NTMP), "a threshold of an increase of 150 vehicles per day (vpd) as a result of an NTMP project is considered unacceptable, regardless of its prior volume." Given the negligible contribution of Project traffic to those roadways, and cut-through traffic less than 150 vpd threshold with addition of Project, additional operational analysis was not conducted.

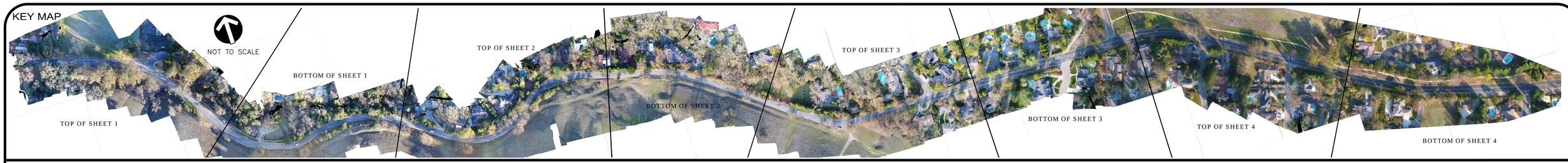
Table J.1: Diablo Cut-Through Survey

Peak Period	Cut-Through Path	Direction	Total Traffic Volume	Cut-Through Traffic	% Cut-Through
7-9 AM	Avenida Nueva NB to Alameda Diablo WB	Westbound	111	6	5%
	Avenida Nueva NB to Calle Arroyo SB	Westbound	111	0	0%
	Alameda Diablo EB to Avenida Nueva SB	Eastbound	143	8	6%
	Calle Arroyo NB to Avenida Nueva SB	Eastbound	143	2	1%
2-4 PM	Avenida Nueva NB to Alameda Diablo WB	Westbound	173	13	8%
	Avenida Nueva NB to Calle Arroyo SB	Westbound	173	3	2%
	Alameda Diablo EB to Avenida Nueva SB	Eastbound	157	13	8%
	Calle Arroyo NB to Avenida Nueva SB	Eastbound	157	2	1%
4-6 PM	Avenida Nueva NB to Alameda Diablo WB	Westbound	152	8	5%
	Avenida Nueva NB to Calle Arroyo SB	Westbound	152	0	0%
	Alameda Diablo EB to Avenida Nueva SB	Eastbound	134	10	7%
	Calle Arroyo NB to Avenida Nueva SB	Eastbound	119	0	0%

Appendix K DIABLO ROAD/BLACKHAWK ROAD SPOT-MEASURED LANE WIDTHS AND AVERAGES

Segment	From	To	Measurements				Averages			
			WB Shoulder	WBT	EBT	EB Shoulder	WB Shoulder	WBT	EBT	EB Shoulder
1	Calle Arroyo	Alameda Diablo	0.8	12.4	12.9	0.4	4.4	15.6	16.5	0.8
			4.0	15.1	12.1	0.6				
			4.2	11.7	16.9	0.4				
			5.4	19.8	11.6	0.9				
			5.9	12.4	22.8	0.5				
			6.1	22.1	22.7	2.0				
2	Alameda Diablo	Avenida Nueva	5.7	13.1	17.5	4.0	1.0	12.0	12.0	0.9
			0.7	12.4	12.3	1.0				
			0.8	12.7	12.0	0.4				
			0.7	12.4	12.3	0.6				
			0.9	12.5	11.5	0.4				
			1.0	13.2	12.1	1.1				
			1.4	12.3	11.6	0.8				
			1.2	12.2	11.4	0.7				
			0.8	12.0	12.2	1.6				
			1.0	12.2	11.5	1.2				
			0.7	12.2	12.3	0.8				
			0.9	12.2	11.6	0.8				
			0.5	12.8	11.8	1.1				
			0.5	13.2	12.4	0.9				
			0.7	12.8	11.9	0.9				
			1.7	12.7	12.2	0.9				
			1.0	11.8	11.6	0.3				
			1.7	10.8	12.8	0.8				
			1.0	12.9	10.8	0.7				
			1.0	12.8	10.9	1.0				
			0.3	11.0	12.2	1.6				
			1.0	11.1	11.9	1.0				
			0.7	11.5	11.8	1.2				
			0.1	11.6	11.7	0.8				
			0.4	11.7	11.4	0.6				
			0.7	12.5	11.6	1.6				
			0.8	11.5	12.7	0.9				
			1.2	11.4	12.4	0.9				
			0.6	10.8	12.5	1.5				
			0.4	10.9	11.8	0.8				
			0.4	11.4	11.9	1.0				
			0.9	12.3	11.9	0.8				
			0.4	12.9	11.7	0.8				
			0.6	11.6	12.1	1.0				
			1.1	11.5	11.9	0.7				
			1.3	11.2	11.9	0.3				
			1.1	11.3	11.5	0.4				
			1.2	11.0	11.4	0.6				
			0.9	12.0	11.4	1.0				
			0.8	12.0	11.8	0.7				
			2.5	12.0	11.6	0.6				
			0.6	11.8	12.0	0.4				
			0.5	11.8	12.2	0.9				
			0.9	12.0	12.1	0.8				
			2.3	11.8	12.0	1.1				
3	Avenida Nueva	Diablo Creek Place	1.0	11.6	12.6	0.8	1.0	13.1	14.7	0.2
			1.3	11.3	12.5	0.8				
			1.0	12.2	12.8	0.8				
			1.0	12.1	12.6	0.8				
			1.0	13.0	23.8	0.0				
			0.7	18.0	21.5	0.0				
			0.8	13.0	14.1	0.0				
			0.6	13.1	13.6	0.0				
			0.7	13.7	13.3	0.0				
			0.7	12.8	15.9	0.0				
			1.5	14.4	14.6	0.0				
			1.2	13.1	12.7	0.0				
			0.6	12.2	13.2	0.0				
			1.2	12.8	12.9	0.0				
4	Diablo Creek Place	Arends Drive	0.6	13.4	14.2	0.0	0.3	16.2	16.3	0.0
			0.9	12.9	14.1	0.0				
			0.8	13.9	14.4	0.0				
			1.0	13.0	14.3	0.0				
			0.9	13.5	13.8	0.0				
			0.9	13.4	14.1	0.0				
			0.0	18.8	14.4	0.0				
			0.0	17.2	15.9	0.0				
			0.0	18.3	17.5	0.0				
			0.0	16.4	17.7	0.0				
			0.0	17.7	18.2	0.0				
			0.0	18.1	17.0	0.0				
			0.0	18.5	18.6	0.0				
			0.0	18.1	18.4	0.0				
			0.0	18.2	18.9	0.0				
			0.0	17.3	19.1	0.0				

KEY MAP

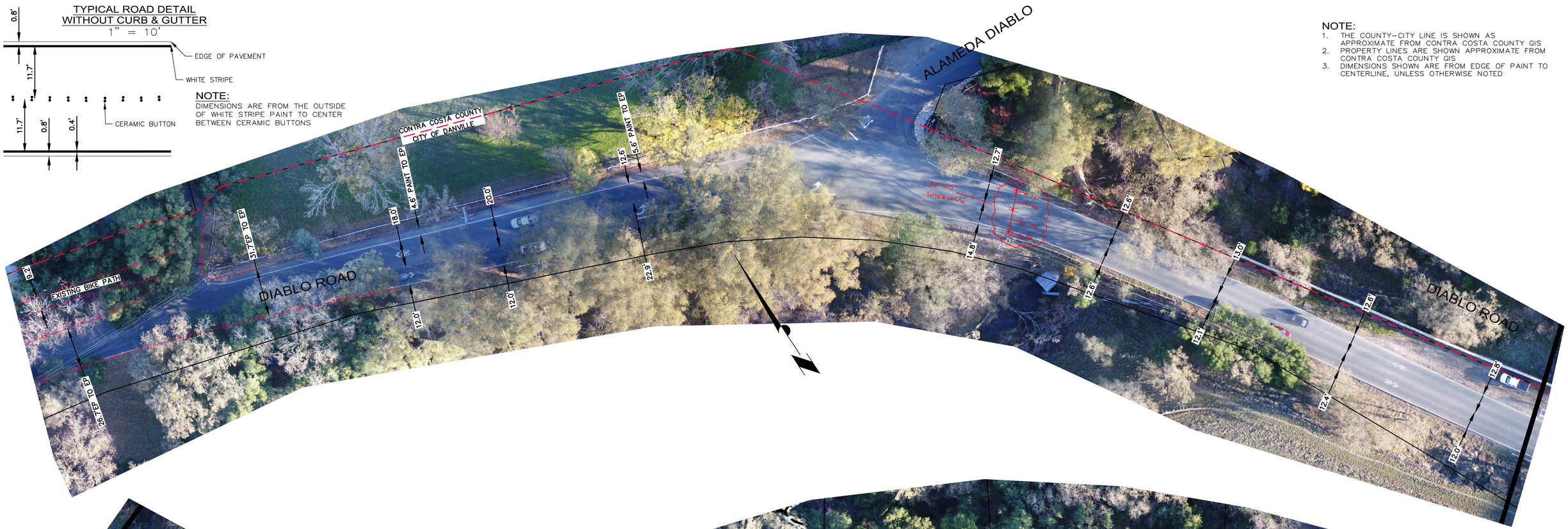


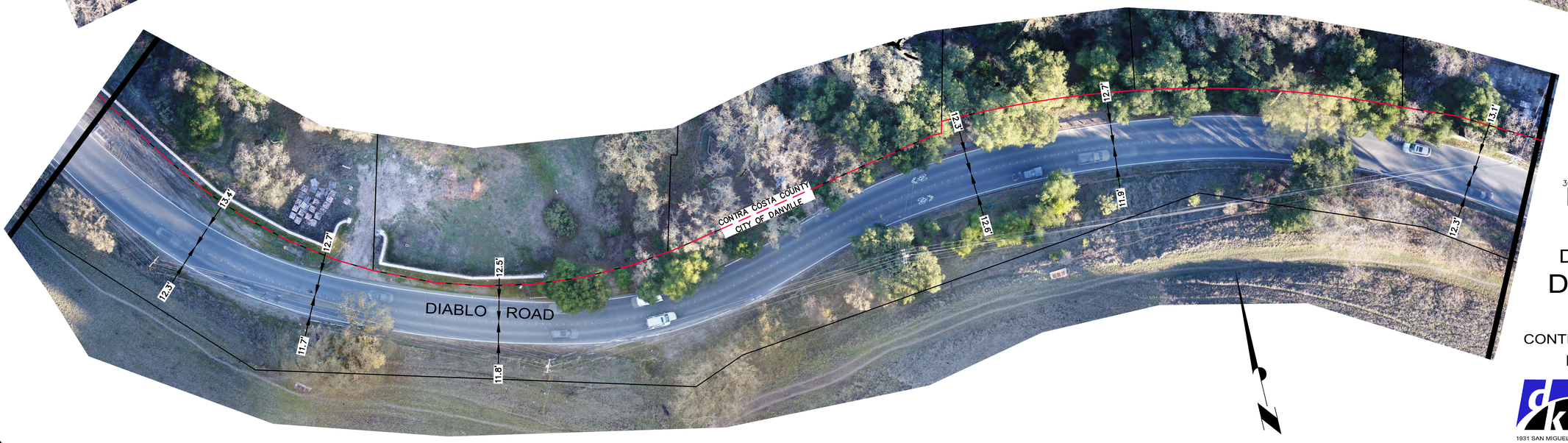
TYPICAL ROAD DETAIL WITHOUT CURB & GUTTER

1" = 10'

NOTE:
DIMENSIONS ARE FROM THE OUTSIDE OF WHITE STRIPE PAINT TO CENTER BETWEEN CERAMIC BUTTONS

NOTE:
1. THE COUNTY-CITY LINE IS SHOWN AS APPROXIMATE FROM CONTRA COSTA COUNTY GIS
2. PROPERTY LINES ARE SHOWN APPROXIMATE FROM CONTRA COSTA COUNTY GIS
3. DIMENSIONS SHOWN ARE FROM EDGE OF PAINT TO CENTERLINE, UNLESS OTHERWISE NOTED





30' 0' 15' 30' 60'
1 INCH = 30 FEET

DAVIDON HOMES
DIABLO ROAD
BIKE PATH

CONTRA COSTA CO., CALIFORNIA
DECEMBER 18, 2017

dk CONSULTING
PLANNING · ENGINEERING · CONSTRUCTION
1931 SAN MIGUEL DRIVE, SUITE 100, WALNUT CREEK, CALIFORNIA 94596, (925) 932-6868

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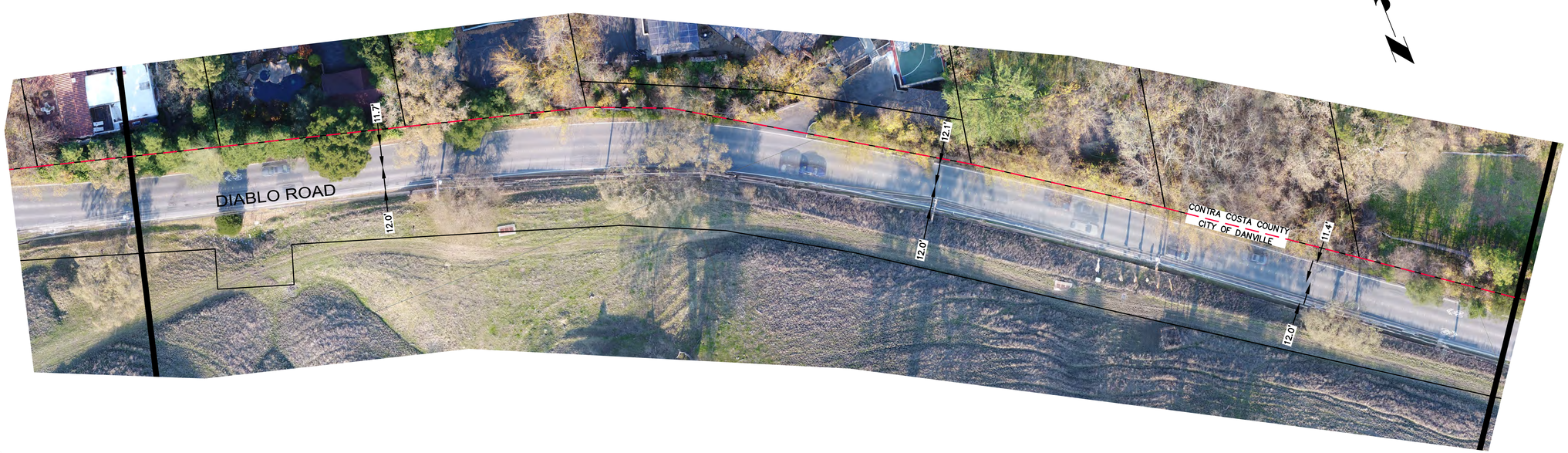
dk JOB# 17-1062-10



30' 0' 15' 30' 60'

1 INCH = 30 FEET

DAVIDON HOMES
DIABLO ROAD
BIKE PATH

CONTRA COSTA CO., CALIFORNIA

DECEMBER 18, 2017

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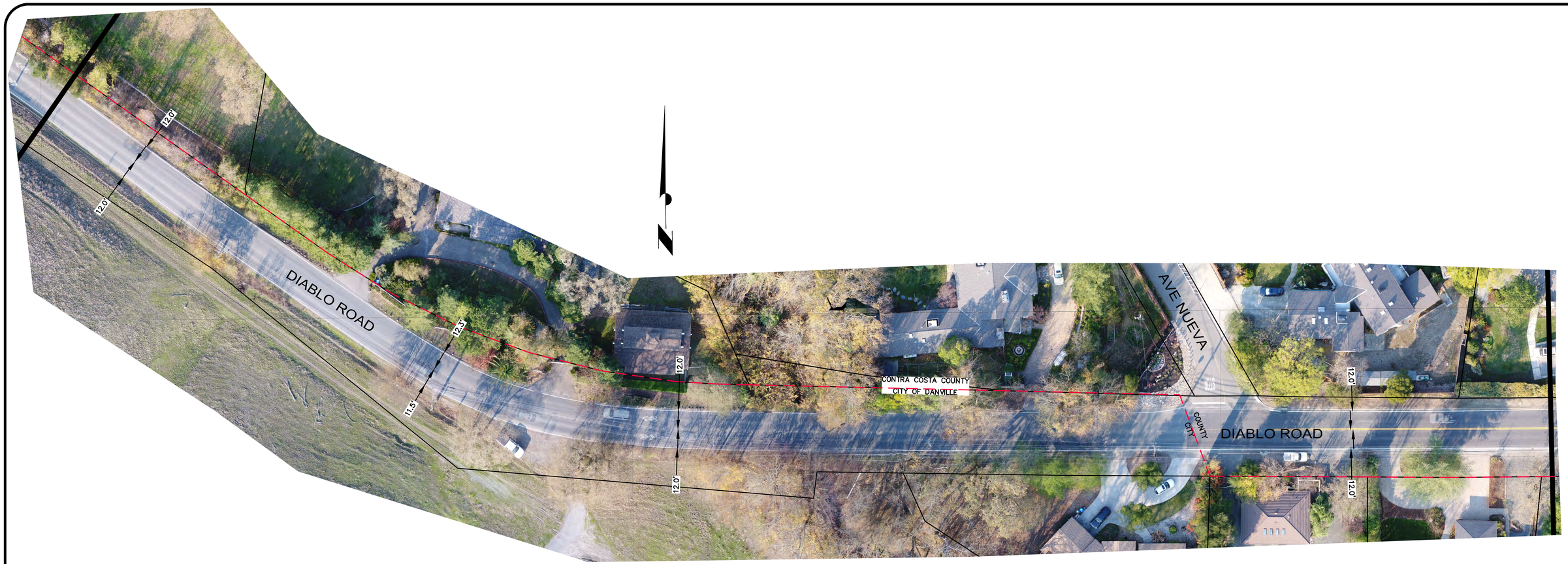

30 0' 15 30 60

1 INCH = 30 FEET

DAVIDON HOMES

DIABLO ROAD

BIKE PATH

CONTRA COSTA CO., CALIFORNIA

DECEMBER 18, 2017

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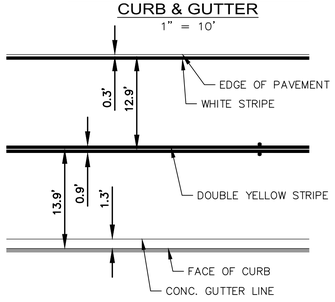
dk JOB# 17-1062-10

TYPICAL ROAD DETAIL WITH CURB & GUTTER

1" = 10'



NOTE:
DIMENSIONS ARE FROM THE OUTSIDE OF WHITE STRIPE PAINT TO CENTER BETWEEN DOUBLE YELLOW STRIPE

OR

FROM FACE OF CURB TO CENTER BETWEEN DOUBLE YELLOW STRIPE

30' 0' 15' 30' 60'
1 INCH = 30 FEET

DAVIDON HOMES
DIABLO ROAD
BIKE PATH

CONTRA COSTA CO., CALIFORNIA
DECEMBER 18, 2017

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