APPENDIX D

Traffic Impact Study

TRAFFIC IMPACT ANALYSIS

FOR

HIDDEN FALLS REGIONAL PARK EXPANSION

Placer County, California

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INTRODUCTION

This report documents KD Anderson & Associates' assessment of traffic impacts associated with implementing the **Hidden Falls Regional Park (HFRP) Expansion Project**. This analysis is intended to quantify the traffic / transportation impacts of the project and identify applicable mitigations within the context of both current and future background conditions.

Project Description

The Hidden Falls Regional Park Expansion project proposes development of trails, parking and other facilities on roughly 2,500 acres to be added to the County's existing park located in the rural area west of the City of Auburn. The current park facilities total 1,200 acres and are located in the area north of Mt. Vernon Road and east of Garden Bar Road, as shown in Figure 1, and the new facilities are generally to the north towards the Bear River. Regional access to the project is via Placer County roads such as Bell Road, Lone Star Road, Cramer Road, Mt. Pleasant Road, Garden Bar Road and Mt. Vernon Road, which link the site with SR 193 to the south, SR 49 to the east and SR 65 to the west.

The HFRP is further identified in Figure 2. From the standpoint of transportation, the project includes construction of 304 new parking spaces and parkwide implementation of the peak period reservations system that has been implemented for the existing HFRP parking area on Mears Drive.

The existing park facilities are directly accessed via Mears Drive, a local Placer County road that extends north from Mt. Vernon Road. Limited public access to the western portion of the park via Garden Bar Road was approved in 2010 but is not currently used. Measures to facilitate interim use of the access via Garden Bar Road are identified and evaluated in this report as well. The proposed project envisions new access via a new public road connection to Bell Road south of the Cramer Road, via Auburn Valley Road west of Bell Road and potentially via private connections off of Bell Road or Mt. Pleasant Road.

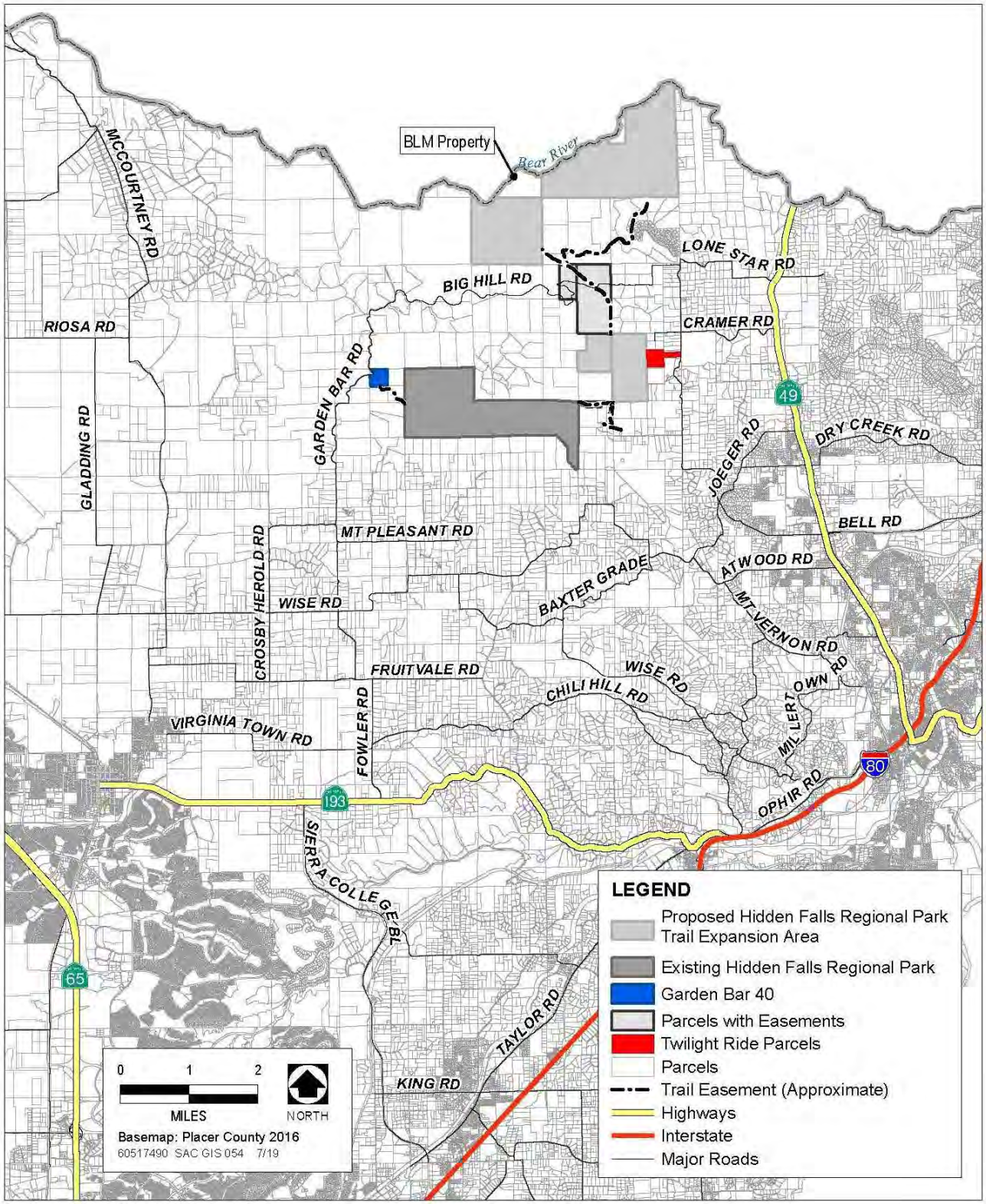
Study Approach

The analysis addresses traffic conditions occurring within the vicinity of HFRP on a weekday and weekend basis. Current 24-hour traffic volumes have been identified for the roads expected to provide access to the expanded park, and weekday p.m. and Saturday midday peak hour conditions have been evaluated at key intersections. Current collision history was reviewed for

the study area and the physical characteristics of study area roadways was described in terms of general horizontal and vertical alignment at key locations.

The approach to this analysis identifies the immediate impacts of the project based on trip generation forecasts which reflect current travel patterns at the Mears Drive facility as well as the effects of the controlled weekend use of the park through the reservation system. Resulting vehicle trips were assigned to the study area circulation system as the "Existing plus Project" condition. These conditions were evaluated with regards to adopted Placer County significance criteria, and the impacts associated with implementing the project were identified. The project's impacts to other transportation modes and to safety were also evaluated.

The cumulative impacts of developing the HFRP Expansion were also evaluated. The cumulative traffic background conditions assumed continuation of historic traffic growth trends identified by Placer County for study area roads, as well as occupancy of other approved and pending projects that would not be part of continuing rural development. The cumulative analysis also reflects implementation of the pending Placer County Winery and Rural Breweries Ordinance amendment. Because the number and exact locations of possible new future wineries and farm breweries is unknown, the cumulative analysis follows the approach of the Wineries and Rural Breweries DEIR which assumed continuation of current trends regarding annual winery and farm brewery development to identify the number of new facilities that might reasonably be expected over the next twenty years. The amount of vehicular traffic associated with events at these new wineries and farm breweries was quantified and trips assigned assuming new facilities in areas most likely to be developed. Resulting cumulative traffic operations were evaluated with and without the HFRP Expansion against adopted significance criteria to identify the cumulative impacts of the proposed project.



Source: Placer County 2016 and 2018

VICINITY MAP

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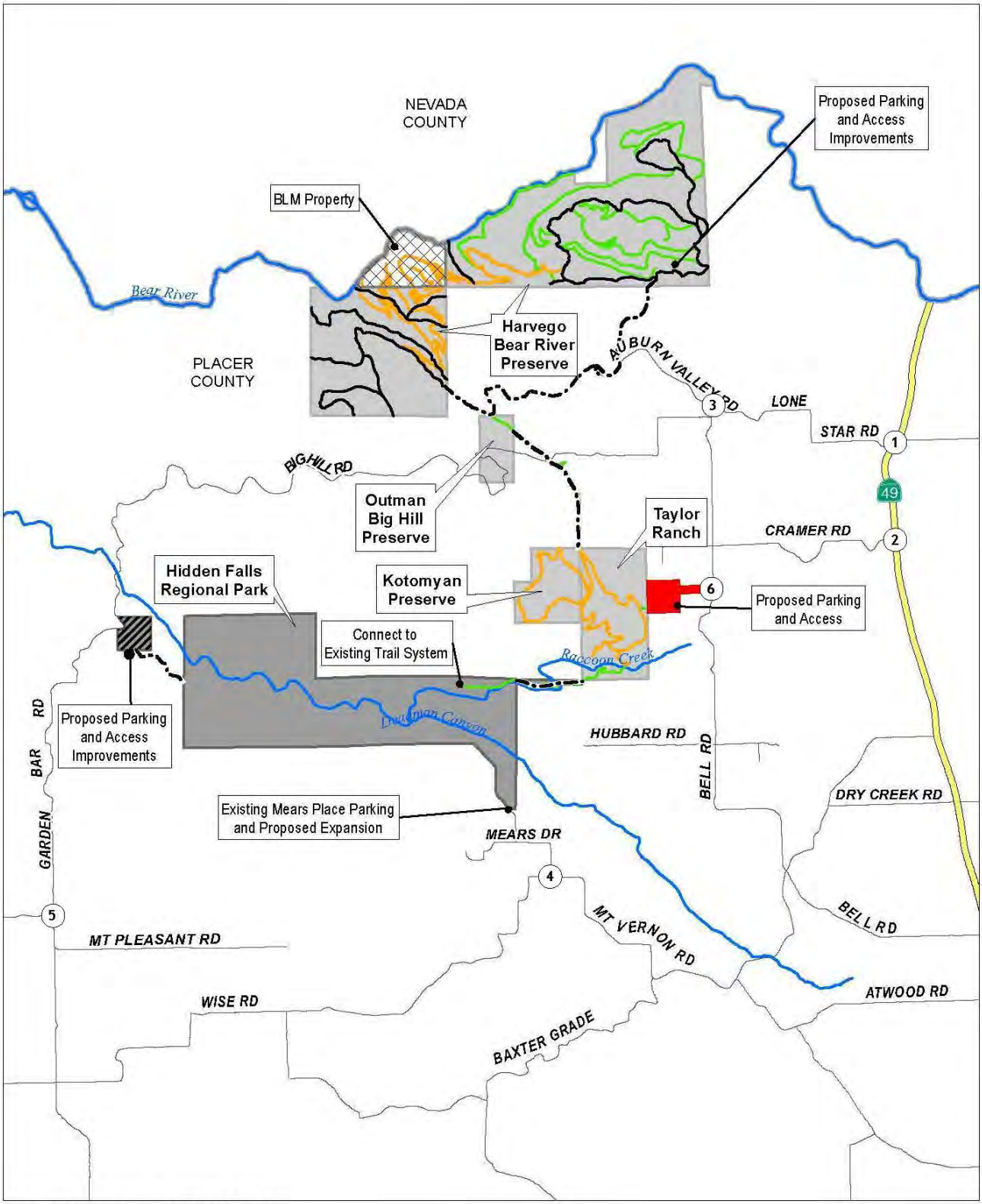
figure 1



Source: Placer County 2017, PLT 2017

HFRP AREAS

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figure 2

EXISTING SETTING

Regionally, the project site is served primarily by various rural Placer County roads and state highways which link the park with Lincoln and SR 65 to the west, Interstate 80 and the Rocklin/ Loomis area to the south and the Auburn area and SR 49 to the east. Regional roads such as Mt. Pleasant Road, Garden Bar Road and Mt. Vernon Road, Big Ben Road, Wise Road, Riosa Road, McCourtney Road, Fowler Road, Fruitvale Road, and Gold Hill Road will link the site with SR 65 to the west and SR 193 to the south, while Bell Road, Lone Star Road and Cramer Road link the property with SR 49 to the east. Locally, the traffic using the site may use various local roads to access the park from Bell Road and from Mt. Vernon Road. The permitted park access off of Garden Bar Road can be reached via Mt. Pleasant Road and Garden Bar Road.

Study Area Circulation System - Roads

Classification. Under the Placer County General Plan the public roads in the study area range in functional class from Rural Arterials to Rural Collectors to local roads. Other private roads provide access to area rural residences and to the Auburn Valley Country Club.

Principal Arterials – PCGP Table 1-7

SR 49 from Interstate 80 to Nevada County (State Highway – Conventional)
SR 65 from Interstate 80 to Yuba County (State Highway – Conventional, except for Interstate 80 to Nelson Road which is – Freeway)
SR 193 from SR 65 to Interstate 80 (State Highway – Conventional)

Rural Arterials

Wise Road from Mt. Vernon Road to SR 65
McCourtney Road from the Lincoln city limits to Camp Far West Road
Joeger Road from Mt. Vernon Road to Dry Creek Road

Rural Collectors

Fruitvale Road from McCourtney Road to Hungry Hollow Road
Mt. Vernon Road from Joeger Road to Wise Road
Mt. Vernon Road from Joeger Road to Auburn
Virginiatown Road from Lincoln to Fowler Road
Riosa Road from the Sutter County line to McCourtney Road
Fowler Road from SR 193 to Fruitvale Road
Bell Road from Joeger Road to Lone Star Road
Wise Road from Ophir Road to Mt. Vernon Road
Baxter Grade Road from Wise Road to Mt. Vernon Road
Gold Hill Road from SR 193 to Wise Road

Local Roads

Mt. Pleasant Road
Mears Drive
Garden Bar Road
Big Hill Road
Big Ben Road
Lone Star Road
Cramer Road

Private Roads

Auburn Valley Road
Curtola Ranch Road

The state highways serving the project area are described below:

Interstate 80 (I-80) is the primary east-west arterial across Placer County and Northern California. In the vicinity of the proposed project, I-80 is a six-lane controlled access freeway. Access for HFRP to the interstate is available via interchanges at SR 193 in Newcastle and at Ophir Road near the City of Auburn and at SR 49 in Auburn.

The California Department of Transportation (Caltrans) provides annual reports of the volume of traffic on the state highway system. Recent counts available from Caltrans report an *Annual Average Daily Traffic (AADT - 2017)* volume of 85,500 vehicles per day west of the SR 193 junction, 88,700 between SR 193 and Ophir Road and 88,300 AADT east of the Ophir Road interchange. (source: http://www.dot.ca.gov/trafficops/census/volumes2016/)

State Route 193 (SR 193) is an east-west route that connects the City of Lincoln with I-80 across the study area. SR 193 originates in Lincoln as McBean Park Drive and becomes SR 193 roughly 1.4 miles west of the Sierra College Blvd intersection and continues from that point to I-80. In the area of the proposed project SR 193 is a two-lane conventional highway. Caltrans data indicate that in 2017 SR 193 carries 9,500 AADT west of Sierra College Blvd and roughly 5,000 AADT between Sierra College Blvd and Newcastle. Trucks comprise 9% of the daily traffic on SR 193 east of Sierra College Blvd.

State Route 49 (SR 49) is a principal arterial that is the primary north-south route through the Auburn – North Auburn area. SR 49 links I-80 with the Grass Valley – Nevada City area to the north. Through North Auburn SR 49 is generally a 4 – 6 lane conventional highway with a continuous center two-way left-turn (TWLT) lane or median, and SR 49 is a 4-lane rural highway.

The most recent traffic counts published by Caltrans indicate that in 2017 SR 49 carried an *Annual Average Daily Traffic (AADT)* volume of 34,700 vehicles per day north of the Bell Road intersection, with the volume reported to be 32,000 AADT in the area of the proposed project north of Dry Creek Road and 30,700 AADT in the area of Lorensen Road to the Nevada County line. Caltrans data indicates that trucks comprise 6% of the Daily traffic on SR 49 in the area of the project.

State Route 65. (SR 65) is an important north-south route that extends from I-80 across the western Placer County to its northern terminus at a junction with SR 70 in Yuba County. SR 65 is a four or six-lane controlled access freeway in the urban Rocklin / Roseville area and continues that configuration through Placer County to the City of Lincoln. Beyond West Wise Road SR 65 is a two-lane expressway or conventional highway to a location north of Wheatland where a four-lane controlled access freeway is again available.

The most recent traffic counts published by Caltrans indicate that in 2017 SR 65 carried 117,400 AADT north of I-80 with 76,800 AADT north of the Blue Oaks Blvd – Washington Blvd interchange and 21,700 AADT at the Placer County – Yuba Countyline. Trucks comprise 15% to 20% of the daily volume on SR 65.

The Placer County roadways addressed in this analysis are those most likely to carry expansion traffic or were previously investigated in the prior HFRP EIR. These roads provide access to the existing park.

Mt. Pleasant Road is a local east-west road that extends for approximately three miles linking Big Ben Road and Mt. Vernon Road.

Mt. Vernon Road is a Rural Collector road that extends easterly from an intersection on Wise Road for about 7 miles into the City of Auburn.

Mears Drive is a local road that connects the existing portion of Hidden Falls Park with Mt. Vernon Road.

Garden Bar Road is a local road that extends north from an intersection on Fruitvale Road across Mt. Pleasant Road along the west side of the Hidden Falls Park for approximately three miles to the Nevada County line.

The following public roads are generally located in the area east and south of the proposed park expansion:

Bell Road is a rural collector road that extends from an intersection on SR 49 north-westerly to Lone Star Road.

Lone Star Road is a local road that connects SR 49 with Auburn Valley Road and the north end of Bell Road.

Cramer Road is a local road that links Bell Road and SR 49.

The following private roads exist in the area around Hidden Fall Regional Park and near the proposed expansion project and would provide access to the new park facilities. The County has rights to these roads either through an offer of dedications or easements.

Auburn Valley Road is a private road that extends west from Bell Road to provide access to Auburn Valley Country Club and to an existing residential neighborhood.

Curtola Ranch Road is a local road that extends north from Auburn Valley Road into the adjoining residential neighborhood and towards the northern portion of the HFRP expansion.

Study Area Circulation System - Intersections

Even in rural areas the quality of traffic flow is often governed by the operation of key intersections, particularly where all-way stop control is employed. The following intersections have been identified for evaluation in this study in consultation with Placer County based on their location along primary routes to the project.

The **Garden Bar Road (North) / Mt. Pleasant Road** intersection is a "tee" intersection controlled by a stop sign on the southbound Garden Bar Road approach. The intersection is located on a horizontal curve along Mt. Pleasant Road. There are no turn lanes on Mt. Pleasant Road at the northern Garden Bar Road intersection.

The **Bell Road / Auburn Valley Road / Lone Star Road** intersection is a "tee" intersection controlled by a stop sign on the eastbound Auburn Valley Road approach. The intersection is located on a horizontal curve that follows Bell Road and Lone Star Road. There are no turn lanes at the intersection.

The **Mt. Vernon Road / Mears Drive** intersection is the primary access to Hidden Falls Regional Park. The intersection is a "tee" controlled by a stop sign on the southbound Mears Drive approach. There are no auxiliary turn lanes at this location.

The **SR 49 / Lone Star Road** intersection is controlled by stop signs on the eastbound and westbound Lone Star Road approaches. The eastbound Lone Star Road approach follows a short (i.e., 60 foot radius curve) horizontal curve as it approaches SR 49. Separate left turn and right turn lanes are provided on both SR 49 approaches, and the left turn lanes continue beyond the area of the intersection as continuous Two-way-Left-turn (TWLT) lanes. The eastbound Lone Star Road approach is a single lane, but the westbound approach has short right turn lane. The intersection is illuminated by street lights.

The **SR 49 / Cramer Road** intersection is controlled by stop signs on the eastbound Cramer Road approach. A separate left turn lane is provided on the northbound SR 49 approach, and the left turn lane continues beyond the area of the intersection as a continuous Two-way-Left-turn (TWLT) lane. A separate southbound right turn lane is provided on SR 49. The eastbound Cramer Road approach is a single lane. The intersection is illuminated by street lights.

Planned Improvements / Funding Sources

South Placer Regional Transportation Authority (SPRTA) Fee Program. Placer County and the cities of Lincoln, Rocklin and Roseville have joined to form the South Placer Regional Transportation Authority (SPRTA). (SPRTA) is a Joint Powers Authority (JPA) formed for the purpose of implementing a Regional Transportation and Air Quality Mitigation Fee to fund specified regional transportation projects.

SPRTA funding is directed towards projects such as Placer Parkway, Sierra College Blvd widening, Lincoln Bypass, I-80 / Douglas Blvd interchange, SR 65 widening, I-80 / Rocklin Road interchange, Auburn Folsom Road widening and HOV lanes on I-80 through Roseville.

Locally, SPRTA funding is part of the ultimate plan for improving Sierra College Blvd from SR 193 to the Sacramento County line. While the SPRTA program outlines the ultimate improvements that will eventually be provided, actual implementation is directed by member agencies in a phased manner.

Placer County Traffic Impact Fee Program and CIP. In April 1996, the Placer County Board of Supervisors adopted the Countywide Traffic Impact Fee Program, requiring new development within the County to mitigate impacts to the roadway system by paying traffic impact fees. The fees collected through this program, in addition to other funding sources, make it possible for the County to construct roads and other transportation facilities and improvements needed to accommodate new development. Additional information regarding the fee program is included in the cumulative analysis.

Standards of Significance: Levels of Service - Methodology

To assess the quality of existing traffic conditions and provide a basis for analyzing project impacts, Levels of Service were calculated at study area intersections, the project access and on individual roadway segments identified by Placer County in response to the EIR Notice of Preparation. "Level of Service" is a qualitative measure of traffic operating conditions whereby a letter grade "A" through "F", corresponding to progressively worsening operating conditions, is assigned to an intersection or roadway segment.

Standards of Significance. Agencies adopt their own minimum LOS standards and standards of significance.

Placer County General Plan. Minimum acceptable Level of Service standards within this area of Placer County are defined by the General Plan. The minimum standard for roadway and intersections is LOS C except at locations within ½ mile of a state highway where LOS D is acceptable.

Placer County has adopted a methodology for determining the significance of traffic impacts within the context of the Level of Service goals established by the General Plan and local community plans. This methodology is noted below.

Roadway Segment Assessment Methodology:

A project may be considered to exceed the minimum LOS policies if;

1) *A roadway segment operating at or above the established Placer County policy without the project will decrease to an unacceptable LOS with the project; or*
2) *A roadway segment currently operating below the applicable established policy will experience an increase in V/C (volume to capacity) ratio of 0.05 or greater; or*
3) *A roadway segment currently operating below the established acceptable LOS Policy experiences an increase in ADT of 100 or more project generated trips, per lane.*

Signalized Intersections Assessment Methodology:

A project may be considered to exceed the minimum LOS policies if;

1) *An intersection operating at or above the established Placer County policies without the project will decrease to an unacceptable LOS with the project; or*
2) *An intersection currently operating below the acceptable LOS established policy will experience an increase in V/C (volume to capacity) ratio of 0.05 (5%) or greater; or*
3) *An intersection currently operating below the established acceptable LOS policy will experience an increase in overall average intersection delay of 4 seconds or greater.*

Un-signalized Intersection Assessment Methodology:

A project may be considered to exceed the minimum LOS policies if;

1) *An all-way stop or side-street-controlled intersection which currently operates at or above the established Placer County policies without the project will deteriorate to an unacceptable LOS with the project and cause the intersection to meet MUTCD traffic signal warrant(s) (1); or*
2) *An all-way stop or side-street controlled intersection which currently operates below the established acceptable LOS policy and meets MUTCD signal warrant(s) will experience an overall increase of 2.5 seconds or more with the project.*

Further consideration will be given in situations where the existing level of service is just above or at the approved minimum level of service and any increase in vehicle trips, or even daily fluctuations in traffic, will deteriorate the level of service to an unacceptable level. In such cases, it may be determined by the County that part (2) or (3) of the above exceptions is more applicable and should be used to analyze a proposed project's impacts.

Analysis Methodologies Intersections. Different methodologies are available to address intersection operations and Level of Service based on the type of traffic control.

Table 1 presents general characteristics associated with each LOS grade.

TABLE 1
LEVEL OF SERVICE DEFINITIONS

Level of Service	Signalized Intersection	Unsignalized Intersection	Roadway (Daily)
"A"	Uncongested operations, all queues clear in a single-signal cycle. Average Delay ≤ 10 seconds per vehicle	Little or no delay. Average Delay ≤ 10 sec/veh	Completely free flow.
"B"	Uncongested operations, all queues clear in a single cycle. Delay > 10 sec/veh and ≤ 20 sec/veh	Short traffic delays. Delay > 10 sec/veh and ≤ 15 sec/veh	Free flow, presence of other vehicles noticeable.
"C"	Light congestion, occasional backups on critical approaches. Delay >20 sec/veh and <35 sec/veh	Average traffic delays. Delay > 15 sec/veh and ≤ 25 sec/veh	Ability to maneuver and select operating speed affected.
"D"	Significant congestions of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed). Delay > 35 sec/veh and < 55 sec/veh	Long traffic delays. Delay > 25 sec/veh and ≤ 35 sec/veh	Unstable flow, speeds and ability to maneuver restricted.
"E"	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay >55 sec and ≤ 80 sec/veh	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/veh and ≤ 50 sec/veh	At or near capacity, flow quite unstable.
"F"	Total breakdown, stop-and-go operation. Delay > 80 sec/veh	Intersection often blocked by external causes. Delay > 50 sec/veh	Forced flow, breakdown.
Sources: 6th Edition Highway Capacity Manual, and Transportation Research Board (TRB) Special Report 209.			

Signalized Intersections. No study intersection is currently signalized, but accepted methodologies would govern evaluation if a traffic signal was found to be needed. Various methodologies exist to determine operating Levels of Service at intersections. The available techniques for addressing intersection vary with regard to factors such as traffic signal timing, interaction between adjoining signals, etc. Caltrans and Placer County make use of the procedures contained in the *Highway Capacity Manual (6th Edition)* for determining operating Level of

Service. This methodology expresses the quality of intersection traffic operations in terms of average delay per vehicle.

Un-signalized Intersections. At un-signalized intersections the number of gaps in through traffic, gap acceptance time and corresponding length of delays for motorists waiting to turn are used for Level of Service analysis. Procedures used for calculating un-signalized intersection Level of Service are as presented the *Highway Capacity Manual (6th Edition).*

At un-signalized intersections controlled by side street stop signs HCM methodology identifies the average delay, and the Level of Service for all movements that must yield the right of way can be determined. Typically the "worst case" Level of Service is associated with side street traffic waiting to turn onto the major street. For environmental analysis Placer County also identified the overall average delay experienced by those motorists who yield the right of way, and this is the measure used to determine the significance of traffic impacts to un-signalized intersections in Placer County.

Methodology for Evaluating Roadway Segment Level of Services. The Placer County General Plan presents daily traffic volume levels that are to be indicative of Levels of Service on arterials streets and rural roads. These volume thresholds are shown in Table 2.

TABLE 2
PLACER COUNTY EVALUATION CRITERIA FOR
ROADWAY SEGMENT LEVEL OF SERVICE

	Maximum Daily Traffic Volume Per Lane Level of Service				
Roadway Capacity Class	**A**	**B**	**C**	**D**	**E**
1. Freeway – Level Terrain	6,300	10,620	13,680	17,740	18,000
2. Freeway – Rolling Terrain	5,290	8,920	11,650	14,070	15,120
3. Freeway – Mountainous Terrain	3,400	5,740	7,490	9,040	9,720
4. Arterial – High Access Control	6,000	7,000	8,000	9,000	10,000
5. Arterial – Moderate Access Control	5,400	6,300	7,200	8,100	9,000
6. Arterial – Low Access Control	4,500	5,250	6,000	6,870	7,500
7. Rural 2-lane Highway – Level Terrain	1,500	2,950	4,800	7,750	12,500
8. Rural 2-lane Highway – Rolling Terrain	800	2,100	3,800	5,700	10,500
9. Rural 2-lane Highway – Mountainous Terrain	400	1,200	2,100	3,400	7,000
Rural 2 lane road – Mountainous Terrain (≥ 18 feet of pavement)[1]	*320*	*960*	*1,680*	*2,720*	*5,600*
Rural 2 lane road – Mountainous Terrain (< 18 feet of pavement)[1]	*265*	*795*	*1,390*	*2,250*	*4,635*

Source: Placer County General Plan FEIR and [1]HFRP Expansion DEIR (2010)

Placer County thresholds account for the general terrain and alignment of rural collector and local roads. The roads towards the western portion of the study area are typically straight and level, while the roads toward the east follow the rolling terrain of the foothills. For this analysis it has been assumed that roadways located in the study area would classified as "rolling". Specific roadway classifications are noted in subsequent tables.

The previous HFRP EIR identified specific traffic volume thresholds for roadways where the pavement width was less than 18 feet. These thresholds were applied to Garden Bar Road and are also presented.

Other Evaluation Criteria

Traffic Signal Warrants. Evaluation of un-signalized Level of Service has been supplemented by consideration of the need for traffic signals based on the Traffic Signal Warrant criteria published in the *California Manual of Uniform Traffic Control Devices (MUTCD).*

Existing Traffic Volumes and Levels of Service

Traffic Volumes. Recognizing the operational characteristics of HFRP, traffic operations have been assessed under both weekday and weekend (Saturday) conditions. Daily traffic volumes were tabulated on key roadway segments, and hourly traffic volume counts were conducted at intersections during the typical weekday p.m. peak hour (4:00 to 6:00 p.m.). Based on review of traffic volume counts in the study area and at HFRP, Saturday turning movement counts were conducted during the midday peak hour on Saturday (noon to 2:00 p.m.).

Daily Traffic Volumes. 24-hr traffic volume counts were collected on study area roadways from new counts or from data available from Placer County. Figure 3 identifies the locations of these traffic counts. Saturday data was collected at various locations on May 28, 2016, October 8, 2016, and June 10, 2017. Weekday data was collected on October 3, 2017 and December 7, 2018. The results of these counts form the basis for Table 3, Existing Roadway Segment Level of Service.

Peak Hour Intersection Traffic Counts. Weekday intersection turning movement counts were collected at various study locations on October 5, 2017 and December 7, 2018. Saturday data was collected on May 21, 2016, May 28, 2016, June 4, 2016, October 8, 2016, October 7, 2017 and August 18, 2018. Intersection count data was collected during the typical weekday p.m. peak hour (i.e., 4:00 to 6:00 p.m.) and during the highest volume hour for activity HFRP (i.e., noon to 2:00 p.m.) on Saturdays. The locations of study intersections and the results of these counts are noted in Figure 3. Traffic count worksheets are included in the appendix to this report.

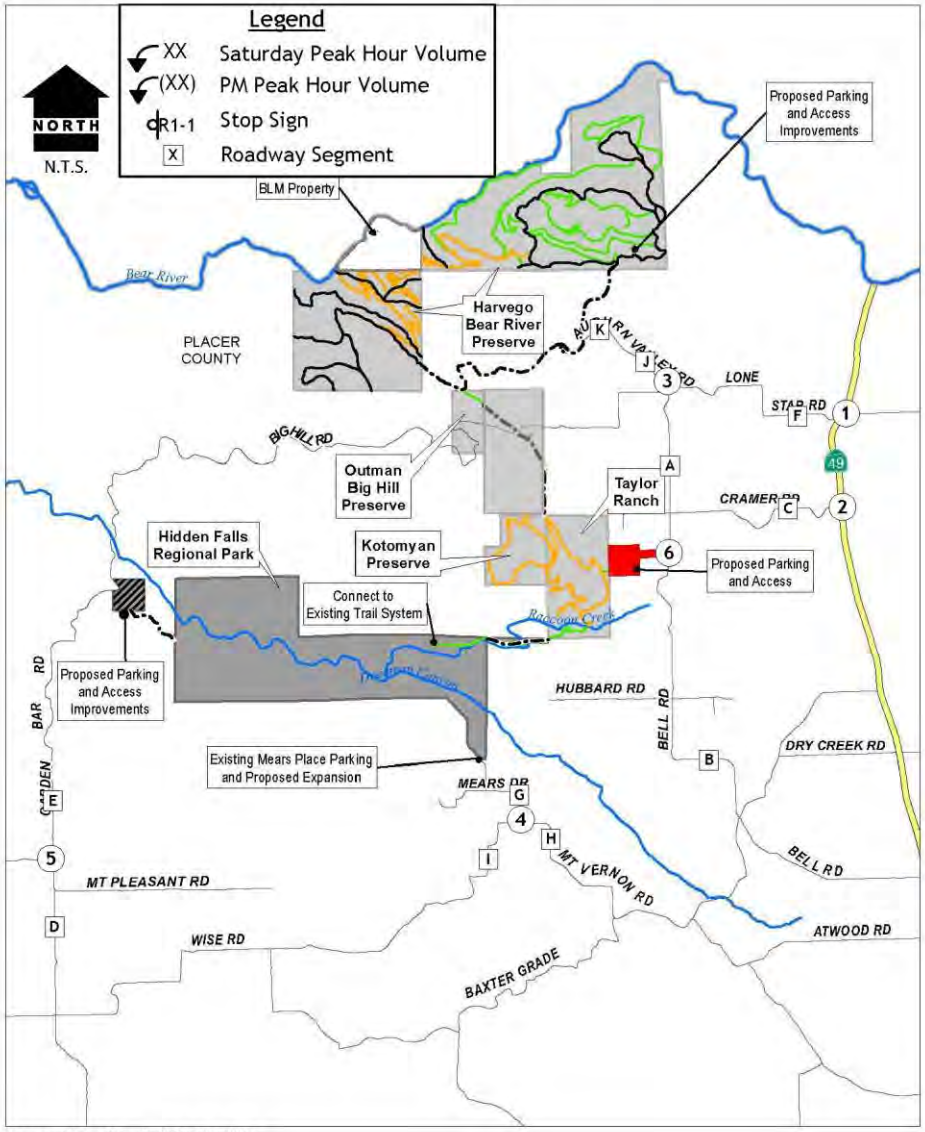
Levels of Service. Levels of Service were determined using methodologies accepted by Placer County.

Roadway Segment Levels of Service. Table 3 identifies the current Level of Service on study area roads based on daily traffic volume. As indicated, all roadways carry traffic volumes that result in Level of Service that satisfy Placer County's minimums standards for rural areas (i.e., LOS C or LOS D based on proximity to a state highway).

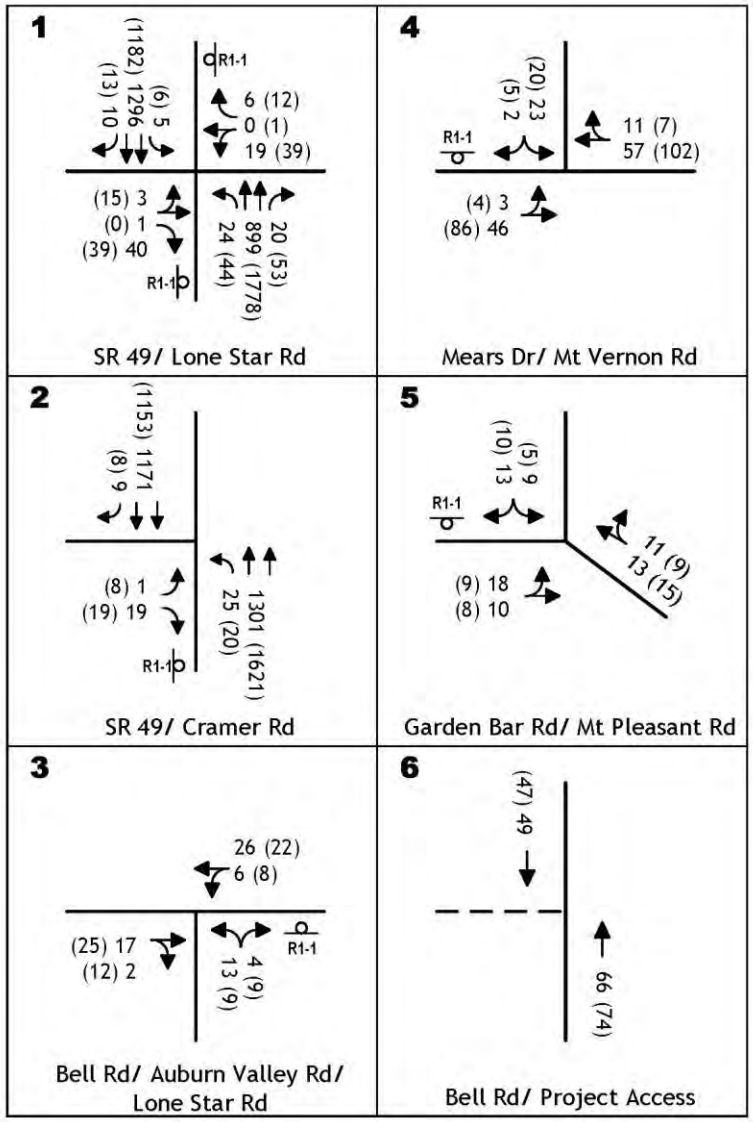
TABLE 3
EXISTING DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE

Road	From	To	Class / Terrain	Saturday		Weekday	
				Volume	Level of Service	Volume	Level of Service
Public Roads							
Mears Drive	Mt. Vernon Road	Park Entrance	Local - R	790[1]	A	493	A
Mt. Vernon Road	Ayers Holmes Road	Buffalo Road	RC - R	1,328	A	1,714	A
Mt. Vernon Road	Mears Drive	Meyers Lane	RC - R	2,679	B	2,010	B
Garden Bar Road	Wise Road	Mt. Pleasant Road	Local - R	691	A	748	A
Garden Bar Road	Mt. Pleasant Road	Big Hill Road	Local - M[2]	316	A	318	A
Bell Road	Lone Star Road	Cramer Road	RC - R	543	A	614	A
Bell Road	Cramer Road	Joeger Road	RC - R	1,329	A	1,400	A
Lone Star Road	Bell Road	SR 49	Local - R	1,223	A	1,328	A
Cramer Road	Bell Road	SR 49	Local - R	548	A	558	A
Private Roads							
Auburn Valley Road	Bell Road	View Ridge Drive	Local - R	884	A	935	A
Auburn Valley Road	Fairway Court	Curtola Ranch Road	Local - R	399	A	295	A

R is Rolling terrain, M is Mountainous terrain
[1] volume is the average of three Saturdays 5/21/2016 – 6/04/2016 and 10/8/2016
[2] Roadway with capacity adjustment for reduced width.



Source: Placer County 2017, PLT 2017



EXISTING TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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figure 3

Intersection Levels of Service. Table 4 identifies current peak hour Levels of Service at study area intersections. As shown, with one exception all study area intersections operate with Level of Service that satisfy Placer County's overall minimum LOS C standard for locations more than ½ mile from a state highway or LOS D for locations within ½ mile of a state highway. The exception is the SR 49 / Lone Star Road where side street approaches operate at LOS F and where the overall weighted average Level of Service is LOS F.

TABLE 4
EXISTING INTERSECTION LEVELS OF SERVICE

#	Location	Control	Weekday PM Peak Hour		Saturday Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	SR 49 / Lone Star Road					
	(overall)		**(106.3)**	**(F)**	**(93.4)**	**(F)**
	Eastbound approach	EB/WB	103.5	F	26.0	D
	Westbound approach	Stop	>300	F	195.6	F
	Northbound left turn		11.9	B	12.9	B
	Southbound left turn		16.5	C	10.2	B
2	SR 49 / Cramer Road					
	(overall)	EB Stop	(15.6)	(C)	(13.0)	(B)
	Eastbound approach		18.8	C	14.6	B
	Northbound left turn		11.3	B	11.8	B
3	Bell Road / Auburn Valley Road / Lone Star Road					
	(overall)	EB Stop	(8.5)	(A)	(8.3)	(A)
	Eastbound approach		8.8	A	9.0	A
	Northbound left turn		7.3	A	7.3	A
4	Mt. Vernon Road / Mears Drive					
	(overall)	SB Stop	(9.5)	(A)	(9.2)	(A)
	Southbound approach		9.8	A	9.4	A
	Eastbound left turn		7.5	A	7.4	A
5	Mt. Pleasant Rd / Garden Bar Rd					
	(overall)	SB Stop	(8.1)	(A)	(8.1)	(A)
	Southbound approach		8.6	A	8.8	A
	Eastbound left turn		7.3	A	7.3	A

(XX) is overall weighted average delay and LOS for those movements yielding right of way
BOLD values exceed minimum LOS standard

Traffic Signal Warrants

The extent to which existing traffic volumes reach the level that satisfy peak hour traffic signal warrants has been evaluated. Peak hour warrants differentiate between *urban* and *rural* conditions based on the prevailing travel speed. Rural warrants are applied for speeds of 40 mph or greater, while urban criteria are employed at lower speeds. For this investigation rural warrant thresholds have been employed in all cases.

Current traffic volumes at all study intersections fall below the level that would satisfy peak hour warrant requirements.

Alternative Transportation Modes

The status of existing facilities for pedestrians, bicycle and transit users have been evaluated based on identification of existing facilities and review of planned programs and improvements.

Transit Services. ***Placer County Transit (PCT)*** provides bus service to most of the urbanized south Placer County area, but services are limited in the rural study area addressed by this analysis. The Auburn Station on Nevada Street in the City of Auburn is the hub for service in Western Placer County. PCT's *Taylor Road Shuttle* travels between Auburn and Sierra College in Rocklin, and this route follows Ophir Road between Auburn and the Ophir Park-&-Ride lot on I-80. This route provides service Mondays through Saturdays from 6:40 a.m. to 8:20 p.m. However, stops on Ophir Road are by reservation only. The SR 49 route follows the state highway north from the Auburn Transit Center to Dewitt Center on Bell Road and Chana High School on Richard Drive south of Dry Creek Road. This service runs Monday through Saturday from 4:35 a.m. to 7:30 p.m. None of these routes are near HFRP.

Bicycle Facilities

The 2018 Update to the Placer County Regional Bikeway Plan (Bikeway Plan) provides the most current information regarding the status of existing bicycle facilities in the study area and plans for future improvements.
http://pctpa.net/library/BikewayPlanning/PlacerCounty_RegionalBikewayPlan_FINAL_20180629.pdf .

The Bikeway Plan notes that there are four types of bikeways defined by Chapter 1000 of the Caltrans Highway Design Manual (2017).

- **Class I Bikeway (Bike Path).** Bike paths or share-use paths provide a completely separated facility designed for the exclusive use of cycles and pedestrians with minimal vehicle crossflows. Motorized vehicles are not allowed on Class I Bike Paths.

- **Class II Bikeway (Bike Lane).** Bike lanes are on-street bikeways that provide a designated right of way for the exclusive or semi-exclusive use of bicycles. Through

travel by motor vehicles or pedestrians prohibited, but vehicle parking and crossflows by pedestrians and motorists are permitted.

- **Class III Bikeway (Bike Route). Bike routes** provide a right-of-way designated by signs or permanent markings and shared with pedestrians and motorists. Roadways designated as Class III Bike Routes should have sufficient width to accommodate motorists, bicyclists, and pedestrians. Shared-lane markings ("sharrows") can be used on roadways with a posted speed limit of 35 mph or less to provide an additional alert to drivers of the shared roadway environment with bicyclists.

- **Class IV Bikeway (Separated Bikeway).** Separated bikeways provide a physical separation from vehicular traffic. This separation may include grade separation, flexible posts, planters, or other inflexible physical barriers, or on-street parking. This class of bikeway has not yet been implemented in Placer County.

Existing Facilities. The Bikeway Plan noted the presence of existing bicycle facilities in its figures 10 (western Placer County) and 11 (Central Placer County), and this information has been described for the study area in Table 5 below. As indicated, dedicated bicycle facilities are rare in the study area.

TABLE 5
EXISTING STUDY AREA BICYCLE FACILITIES

Road	Location	Facility Designation
SR 193	Oak Tree Lane to Lincoln City limit	Class II
Ophir Road	Newcastle to I-80	Class II
English Colony Road	Penryn Elementary School to UPRR	Class III
Auburn Folsom Road	Auburn to Douglas Blvd	Class III
Bell Road	SR 49 to I-80	Class II
Lozanos Road	Adjoining Ophir Elementary School	Class III
Meadow Vista Road	Placer Hills Road to Pine Cone Lane	Class III
Richardson Drive	Joeger Road to Dry Creek Road	Class III

The Bikeway Plan notes the presence of recreational cyclist on many rural roads and identifies High-Use Recreational Routes in its figure 19. Nearly all study area roads fall under this classification.

Planned Improvements. The Bikeway Plan notes facilities that may be developed in the future, and study area facilities are noted in its figures 23, 28, 29 and 30. These facilities are noted in Table 6. The Bikeway Plan also noted "priority", with those facilities that would be expected to be constructed first having higher scores.

TABLE 6
FUTURE STUDY AREA BICYCLE FACILITIES

Road	Location	Facility	
		Designation	Priority
SR 193	Lincoln to Newcastle	Class II	4
Ophir Road	Newcastle to I-80	Class II	existing
Atwood Road	Mt. Vernon Road to SR 49	Class II	4
Bell Road	Lone Star Road to Joeger Road	Class III	2
Bell Road	Joeger Road to I-80	Class II	8
Cramer Road	Bell Road to SR 49	Class III	0
Dry Creek Road	Joeger Road to SR 49	Class II	6
English Colony Way	Sierra College Blvd to school	Class III	3
English Colony Way	School to Taylor Road	Class II	4
Fowler Road	SR 193 to Virginiatown Road	Class III	2
Garden Bar Road	Wise Road to Mt. Pleasant Road	Class II	1
Garden Bar Road	Mt. Vernon Rd to Hidden Falls Park	Class III	1
Gold Hill Road	SR 193 to Virginiatown Road	Class III	4
Horseshoe Bar Road	Loomis to Auburn Folsom Road	Class II	5
Joeger Road	Mt. Vernon Road to Bell Road	Class III	2
Joeger Road	Bell Road to Dry Creek Road	Class II	3
Joeger Road	Dry Creek Road to SR 49	Class III	3
Lone Star Road	Bell Road to SR 49	Class III	0
Lozanos Road	By Ophir Elementary School	Class III	existing
McCourtney Road	Lincoln to Wise Road	Class II	2
McCourtney Road	Wise Road to Camp Far West	Class III	2
Mears Drive	Hidden Falls Park to Mt. Vernon Road	Class III	-
Mt. Vernon Road	Wise Road to Mears Drive	Class III	-
Mt. Vernon Road	Mears Drive to Merry Knoll Road	Class II	3
Park Drive	Richardson Drive to Quartz Drive	Class II	7
Richardson Drive	Joeger Road to Dry Creek Road	Class III	existing
Richardson Drive	Dry Creek Road to Park Drive	Class II	7
Ridge Road	Gold Hill Road to Ophir Road	Class III	4
Virginiatown Road	Lincoln to Gold Hill Road	Class III	2/4
Wise Road	McCourtney Rd to Garden Bar Road	Class II	1
Wise Road	Garden Bar Road to Ophir Road	Class III	3

Physical Characteristics of Project Area Roads

Guidelines and Standards. The physical characteristics of study area roads have been described in terms of existing alignment and width and have been compared to Placer County's standard for roads as part of new construction, as well as guidelines for sight distance and horizontal curves.

A comparison to these standards does not by itself, however, indicate that roadways that do not need the standards for new construction are unsafe nor that the County has plans or funding for major reconstruction to improve rural roadways to meet the current standards.

Placer County's Standard Specifications (2018) / Land Development Manual. Standard specifications include Design Plates that prescribe the configuration roads and intersections. https://www.placer.ca.gov/DocumentCenter/View/3814/Plates-100-to-127---Roads-PDF Detail Plate 102 notes that a *Rural Minor Residential* road provides two 12-foot travel lanes. A *Rural Secondary* road has two 16-foot travel lanes. The Land Design Manual https://www.placer.ca.gov/DocumentCenter/View/3833/Streets-PDF notes that horizontal curve radii for new construction shall be as specified in the Caltrans Highway Design Manual based on Maximum Comfortable Speed on Horizontal Curves.

Sight Distance. Table 201.1 of the Caltrans Highway Design Manual (HDM) notes minimum stopping sight distance requirements for various speeds. These minimums range from 150 feet at 25 mph, to 200 feet at 30 mph to 360 feet at 45 mph. Placer County Plate 116 notes sight distance requirements for new intersections and driveway that are predicated on HDM Table 405.B Corner Sight Distance Requirements. Plate 116 requirements range from 275 feet at 25 mph to 385 feet at 35 mph and 495 feet at 45 mph.

Curve Radii. The speed at which motorists can negotiate horizonal curves is depended on factors such as the length of radius and the rate of super-elevation. Placer County Land Development Manual makes reference to HDM Table 203.2 "Comfortable Speeds on Horizontal Curves", which has been replaced in the current HCM by Table 202.2 "Maximum Comfortable Speed on Horizonal Curves". This reference suggests that without super-elevation a 30 mph design would justify a 300 foot radius curve, while a 35 mph design would require a 475 foot radius and a 900 foot radius is needed for 45 mph.

Area Roadways. The text which follows describes the general characteristics of area roads.

Mt. Pleasant Road extends for approximately three miles linking Big Ben Road and Mt. Vernon Road. The alignment Mt. Pleasant Road follows the rolling terrain of the foothills west of Auburn. The road itself is 20 to 22 feet wide with graveled shoulders of varying width. The posted speed limit is 40 mph.

Mt. Vernon Road runs easterly from an intersection on Wise Road for about 7 miles into the City of Auburn. Mt. Vernon Road is typically 18-21 feet wide. No Parking signs have been installed in the area of HFRP. The speed limit on Mt Vernon Road is 40 mph.

Mears Drive is a local road that connects the existing portion of Hidden Falls Park with Mt. Vernon Road. This two-lane road features 18-20 feet of pavement and limited shoulders. No Parking signs have been installed in the area of HFRP. The speed limit is 30 mph.

Garden Bar Road is a local road that extends north from an intersection on Fruitvale Road across Mt. Pleasant Road along the west side of the Hidden Falls Park for approximately three miles to the Nevada County line. The alignment and width of Garden Bar Road varies greatly along its length. In the area of the park the road varies from approximately 12 to 20 feet in width. Shoulders are most often non-existent and horizontal curves with radii as short as 80 feet exist at various locations. The previous HFRP Expansion EIR identified improvements to Garden Bar Road north of Mt. Pleasant Road that were required to accommodate regular automobile traffic as well as the requirements of vehicles that were pulling horse trailers.

The following public roads are generally located in the area east and south of the proposed park expansion:

Bell Road is a rural collector road that extends from an intersection on SR 49 north-westerly to Lone Star Road. The portion of Bell Road in the area of HFRP is a two-lane road that is typically 20 to 22 feet in width. The alignment of Bell Road from Lone Star Road to Joeger Road follows rolling terrain, but there are locations where the combination of topographical features and intersecting roadway locations results in curves that would not meet county standards for new construction. The road follows a 40-foot radius curve through the Auburn Valley Road intersection, and in the area between Auburn Valley Road and Cramer Road there are a pair of 175 foot – 200 foot horizontal curves. South of Cramer Road to Joeger Road there is a series of short radius curves that begins around Carter Canyon Road and continue through New Hope School Road. These horizontal curves combine with vertical roadway alignment and adjoining topography to limit sight distance at private driveways. In many locations achieve acceptable sight distance require looking across private property on the inside of horizontal curves, and this is true on most study area roads.

Lone Star Road is a local road that connects Bell Road with SR 49. Lone Star Road is a two-lane road with pavement width that ranges from 18 to 22 feet. The alignment of Lone Star Road features several small radius curves, including several locations where road intersections were reconstructed. There are seven curves with radii ranging from 60 to 200 feet, including a tight curve immediately adjoining the Lone Star Road / SR 49 intersection. As noted with Bell Road, the combination of horizontal / vertical alignment and adjacent topography can limit sight distance. This is particularly true in the area of the Lone Star Valley Road intersection where sight distance to adjoining property is appreciably limited.

Cramer Road is a local road that links Bell Road and SR 49. Cramer Road is a two-lane road with pavement width of 20 to 22 feet. The roadway alignment passes through several short radius curves, and seven curves appear to have radii in the range of 75 feet to 200 feet. While the combination of roadway curvature and adjoining topography limits sight distance at driveways in some locations, the area roughly 500 to 1,000 from SR 49 lacks shoulder through an area where the roadway lies along an embankment.

The following private roads exist in the area around Hidden Falls Regional Park and near the proposed expansion project and would provide access to the new park facilities.

Auburn Valley Road is a private road that extends west from Bell Road to provide access to Auburn Valley Country Club and to an existing residential neighborhood. The paved width of this two-lane road varies from 19 to 22 feet. The alignment of Auburn Valley Road is gently rolling and there are no obvious sight distance limitations. However, the roadway lacks shoulders in what is a developed residential area.

Curtola Ranch Road is a private road that extends north from Auburn Valley Road to a portion of the Harvego Bear River Reserve. The road is paved with a width of 18 to 20 feet for about 700 feet north of Auburn Valley Road. From that point on the roadway is graveled. The width narrows as the road extends northly and is a one-lane facility across a local dam.

The following private roads exist in the area around Hidden Falls Regional Park and near the proposed expansion project. These roads could provide access to new parking facilities on private lands that might be developed exclusive of the actual HFRP facilities, although no proposals for such private parking areas exists today. Further environmental review would be required for any parking on private property.

Godley Road and ***Wilson Way*** are private roads that extend north from Mt. Vernon Road towards the southern boundary of the existing Hidden Falls Regional Park. Godley Road has an average width of 15 to 18 feet, while Wilson Way is generally 11 to 16 feet wide.

Collision History

Placer County has a robust Traffic Accident Analysis System (TAAS) in which traffic collision data is collected and reviewed on an annual basis. It is recognized that many roadways throughout the County do not conform to current design standards and guidelines; however, the fact that a roadway does not meet current design standards does not necessarily make safety improvements essential. Traffic and roadway engineering design standards and guidelines have evolved over many years; therefore, many roadways that do not display any safety deficiencies no longer meet the current standards simply due to the passage of time since their construction. Conversely, some roadways that meet current standards may display safety deficiencies. The TAAS recognizes that reconstructing all roadways that do not meet current design standards would be financially infeasible, and that doing so would expend funds to upgrade many roadways that operate safely. Through the TAAS program, locations for detailed engineering investigations are identified and improvements to facilitate safe travel for all modes, if necessary, are implemented on a regular basis.

Consistent with the TAAS guidelines, three-years of collision history (January 1, 2014 – December 31, 2016) was obtained for study area roadways. This information was reviewed, and roadway collision rates were calculated based on the number of collisions per Million Vehicle Miles (MVM) of travel. This method permits comparison of roadways carrying different traffic volumes. In addition, reference to average collision rates for various types of facilities is a

helpful way to determine if a location is experiencing a higher than expected rate of collisions. Comparative collision rates are published by Caltrans based on statewide data, based on the formulas noted in Table 7.

TABLE 7 2010 STATEWIDE AVERAGE COLLISION RATES		
Rural		
2-lane Flat - Rural ≤55	0.82	+0.35/ADT
2-lane Rolling - Rural ≤55	1.14	+0.35/ADT
Suburban (outside City limits, but classified as urban by FHWA)		
2-lane Suburban < 45 MPH	2.39	
2-lane Suburban 45 - 55 MPH	1.32	

As noted in Table 8, the study area roadways are generally experiencing collision rates at, or below, the comparative statewide average for their facility types. However, review of that data reveals that while Cramer Road has experienced only three collisions over this time period, because the traffic volume is low the accident frequency rate exceeds the statewide average for similar facilities.

TABLE 8
COLLISION ANALYSIS (1/1/2014 - 12/31/2016)

Road Name	From	To	Length (miles)	Segment Related Collisions (3-year)	ADT	Collision Rate	Statewide Average
Ayers Holmes Road	Mt. Vernon Road	Wise Road	0.9	0	412	0.00	1.99
Bald Hill Road	Wise Road	Mt. Vernon Road	2.1	2	1309	0.66	1.32
Baxter Grade Road	Wise Road	Mt. Vernon Road	2.1	3	971	1.34	1.50
Bell Road	Lone Star Road	Richardson Drive	5.2	9	1400	1.13	1.39
Chili Hill Road	Lozanos Road	Gold Hill Road	3.7	1	355	0.70	2.13
Cramer Road	Bell Road	SR 49	1.6	3	558	3.07	1.77
Crosby Herold Road	Fruitvale Road	Mt. Pleasant Road	2.3	1	525	0.76	1.81
Delmar Avenue	Sierra College Blvd	English Colony Way	1.9	0	1126	0.00	1.13
Fowler Road	SR 193	Virginiatown Road	0.9	3	3412	0.89	0.92
Fleming Road	Gladding Road	McCourtney Road	1	0	43	0.00	8.96
Fruitvale Road	McCourtney Road	Gold Hill Road	5.1	2	1486	0.24	1.38
Gold Hill Road	SR 193	Wise Road	2.4	2	1542	0.49	1.37
Lone Star Road	Bell Road	SR 49	1.8	1	1328	0.38	1.40
McCourtney Road	Wise Road	Big Ben Road	1.8	1	1192	0.43	1.11
Millertown Road	Wise Road	Mt. Vernon Road	2.3	0	150	0.00	2.39
Mt. Vernon Road	Wise Road	Joeger Road	4.8	13	2021	1.22	1.31
Mt. Vernon Road	Joeger Road	City of Auburn	3.4	16	2995	1.43	2.39
Ridge Road	Gold Hill Road	SR 193	3.5	5	789	1.65	1.58
Virginiatown Road	City of Lincoln	Gold Hill Road	5.4	6	773	1.31	1.27
Wise Road	McCourtney Road	Garden Bar Road	2.5	5	2575	0.71	0.96
Wise Road	Garden Bar Road	Ophir Road	9.7	14	1394	0.95	1.39

HIGHLIGHTED values exceed statewide average by more than 10%

Additional review of the collision history was conducted for Cramer Road. As noted in Figure 4, one collision occurred immediately west of the SR 49 intersection, where a motorist DUI hit a fixed object. A second collision occurred 1,000 feet west of Oak Hollow Lane and involved a head-on collision between a vehicle and a motorcycle proceeding on the wrong side of the road. Cramer Road is in a curve at this location. The third collision occurred 1,400 feet east of Oak Hollow Lane when the driver was eating and allowed the vehicle to run off the road and strike a fence. The information available for these three collisions is not indicative of a particular pattern of accident cause or location.

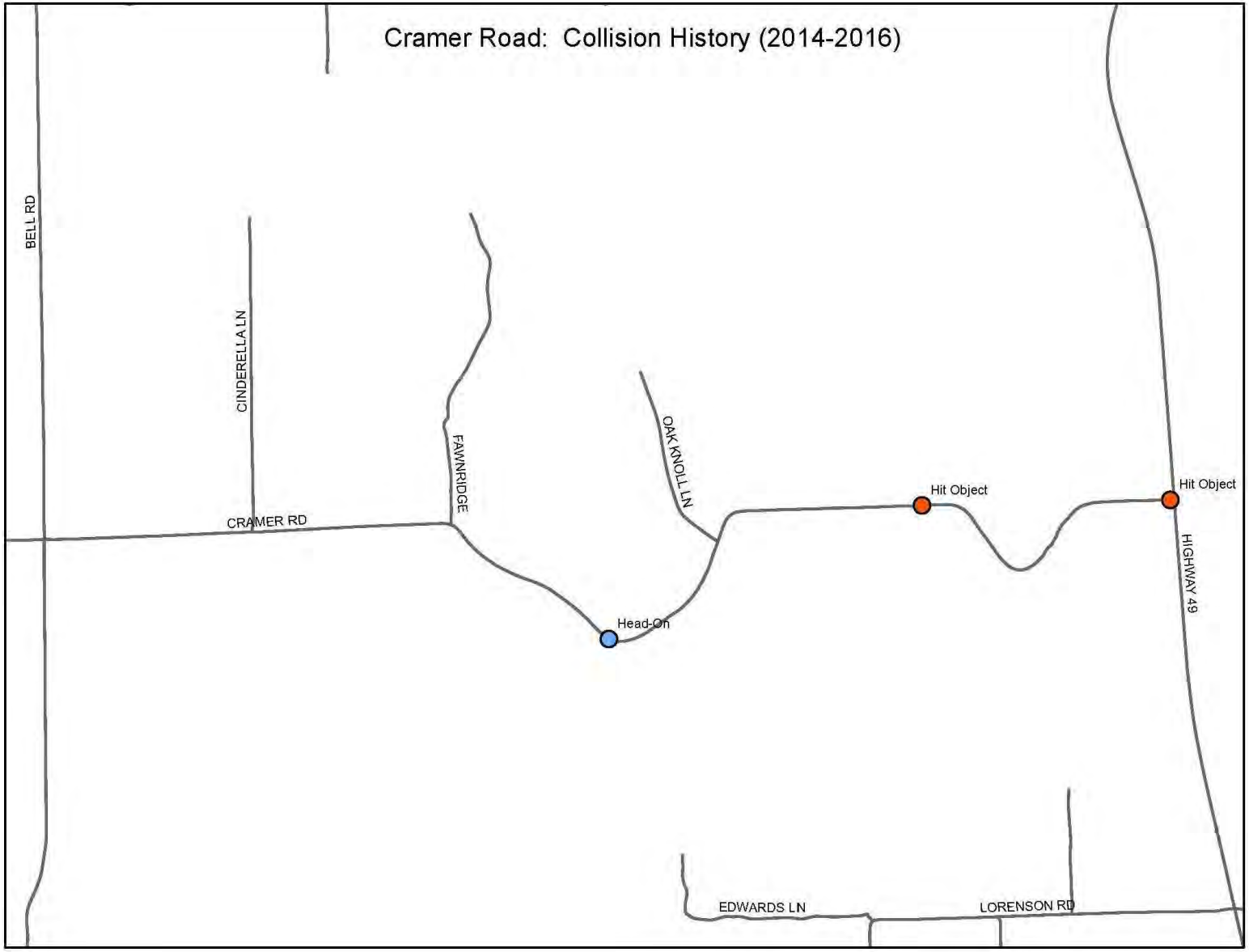
The Regional Bikeway Plan also presents information regarding bicycle related collisions that have occurred countywide from 2012 to 2016 (refer to Table 5 in the Bikeway Plan). A total of 74 collisions were identified, and the Bikeway Plan's Figure 20 illustrates the location of collisions. Review of that figure indicates that excluding incidents occurring on SR 49 in North Auburn, eight bicycle related collisions occurred in the study area.

Within the study area specific locations have been a concern to the community, and intersections on the State Route 49 corridor are of particular concern. Caltrans and Placer County have discussed measures to improve safety by slowing the speed of traffic on SR 49 and controlling opportunities to access the state highway. The solution most recently raised would involve installation of modern roundabouts at two or three intersections in the area between Auburn and the Bear River in lieu of traffic signals. Roundabouts would slow traffic and provide a safe location for accessing the state highway. Motorists accessing the highway at locations between the roundabouts would be able to turn right and use the next roundabout to make a u-turn, rather than making left turns across high speed traffic. While this plan may have merit, funding for the project has not yet been identified.

Placer County regularly monitors the status of its roads and takes corrective actions where needed. In the spring of 2016, the Department of Public Works and Facilities completed a Roadway Safety Sign Audit which recommends the replacement, relocation and installation of yellow warning signage at various locations on 62 roadways in Placer County. In November 2018 the Board of Supervisors authorized the *Roadway Safety Sign Audit and Sign Upgrade Project*. The need to complete this project is based upon safety analyses undertaken by the Department to identify high collision concentration locations that resulted in a safety evaluation of selected roadway corridors. This project undertakes to provide a systemic solution for these collision locations in the form of updating curve warning signage for the whole length of roadway. Current Caltrans standards as identified in the 2014 Manual of Uniform Traffic Control Devices (MUTCD) specify placement of new warning signs for roadway curves based upon the advisory speed of the curve, as well as replacement of signs due to the poor physical condition or lack of reflectivity of the sign. The scope of this project includes installation of approximately 1,800 new curve warning signs, relocation of 350 existing signs, replacement of 1,000 signs and removal of 1,300 signs along 62 County roadways. This project is expected to be constructed during the spring and summer of 2019.

Study area roadways addressed by this safety project include:

- Bell Road from Lone Star Road to SR 49
- Joeger Road
- Mt. Vernon Road



CRAMER ROAD COLLISION LOCATIONS

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figure 4

PROJECT CHARACTERISTICS

Project Site Plans and Improvements

The site plans developed for the four areas of the HFRP project are noted in Figures 5, 6, 7 and 8.

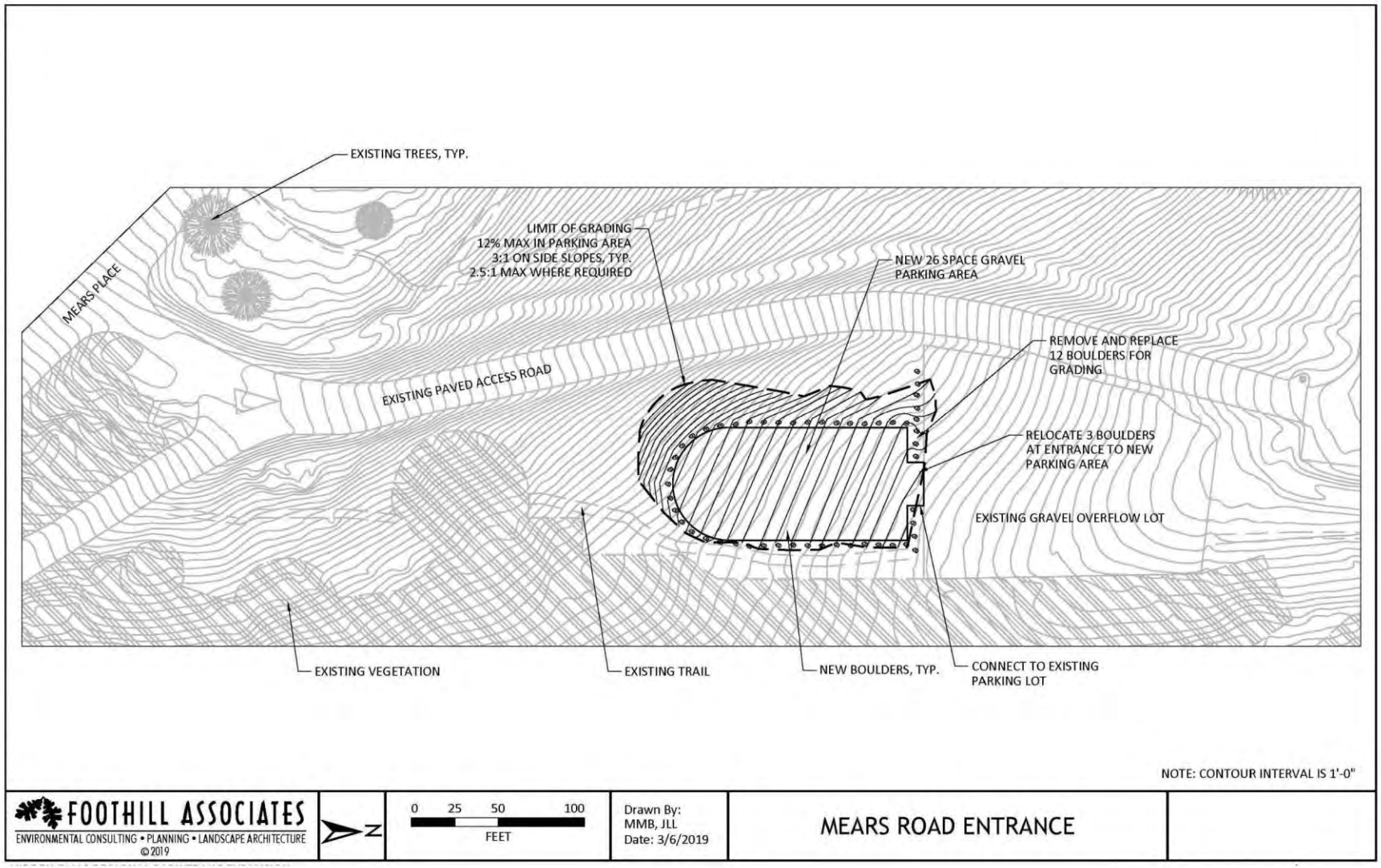
As noted the following improvements are included in each area:

Curtola Ranch Site. Access to this site from Auburn Valley Road will occur via an extension of Curtola Ranch Road. As part of that work, a minimum 20-foot seal coat or pavement section will be provided as noted under the project phasing discussion.

Garden Bar Road Site. Per the adopted use permit for the site, Garden Bar Road will be incrementally widened to provide a minimum 18-foot roadway section and to improve tight curves in order to accommodate passenger vehicles with subsequent improvements to accommodate vehicles pulling trailers. A new access intersection on Garden Bar Road will also be constructed.

Mears Drive site. No improvements to site access are planned with this project.

Twilight Ride site. Site access will be created on Bell Road. The proposed access is located roughly 240 feet south of the parcel's current driveway, but use of the existing access is considered an alternative. A northbound left turn lane is indicated conceptually in the current site plan. No other improvements are proposed.



MEARS ROAD SITE

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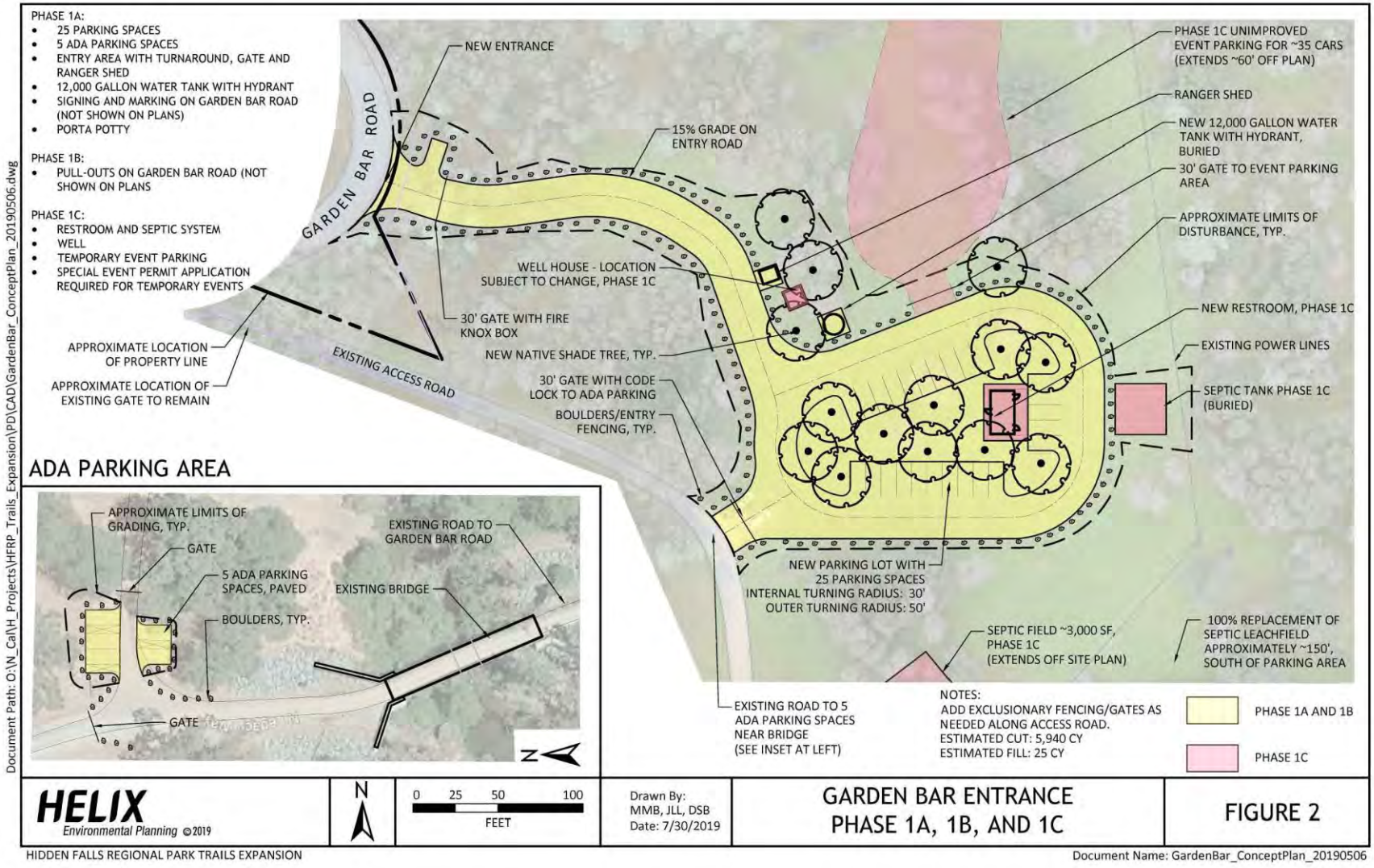
figure 5



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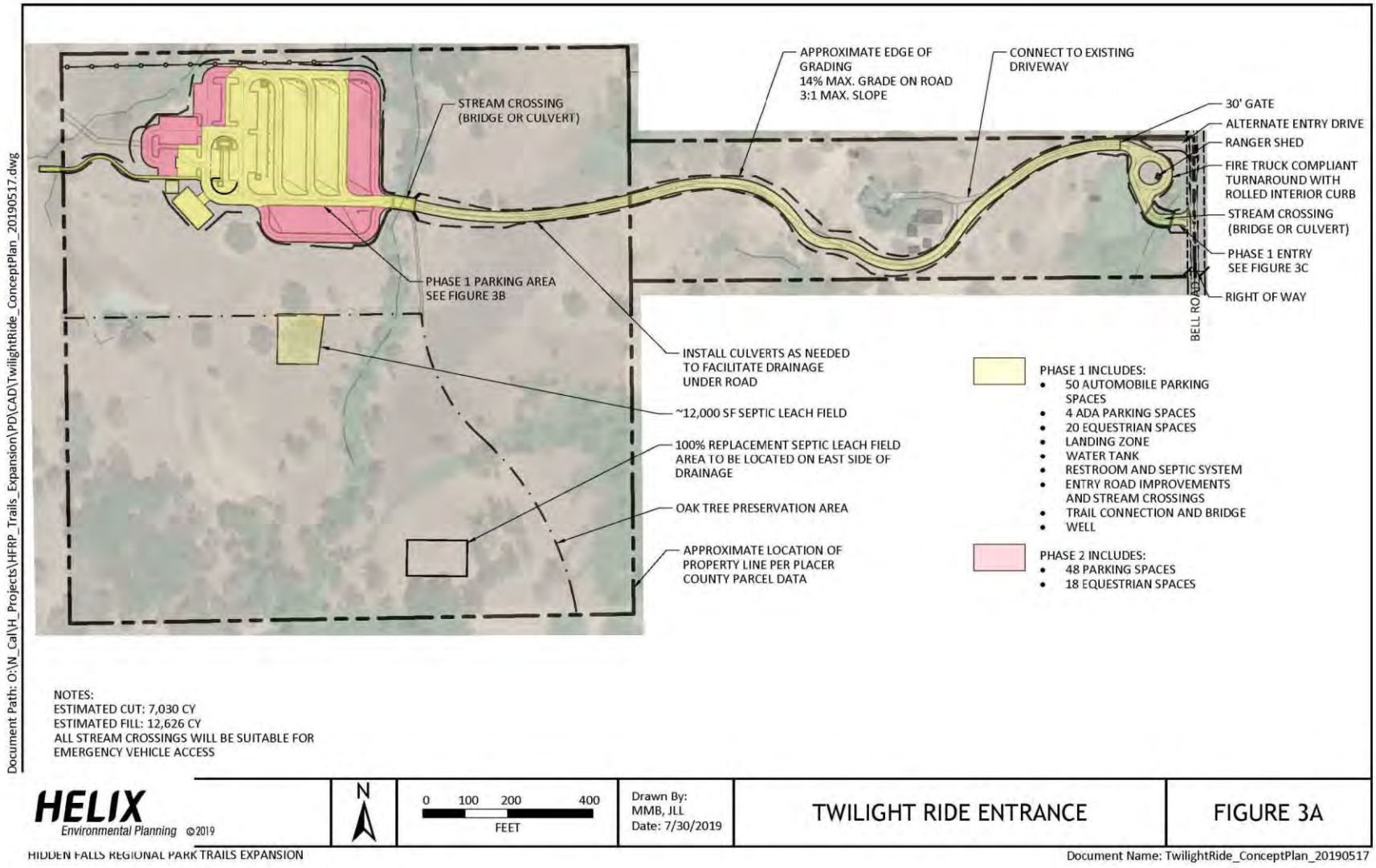
GARDEN BAR ROAD SITE

figure 6



TWILIGHT RIDE SITE

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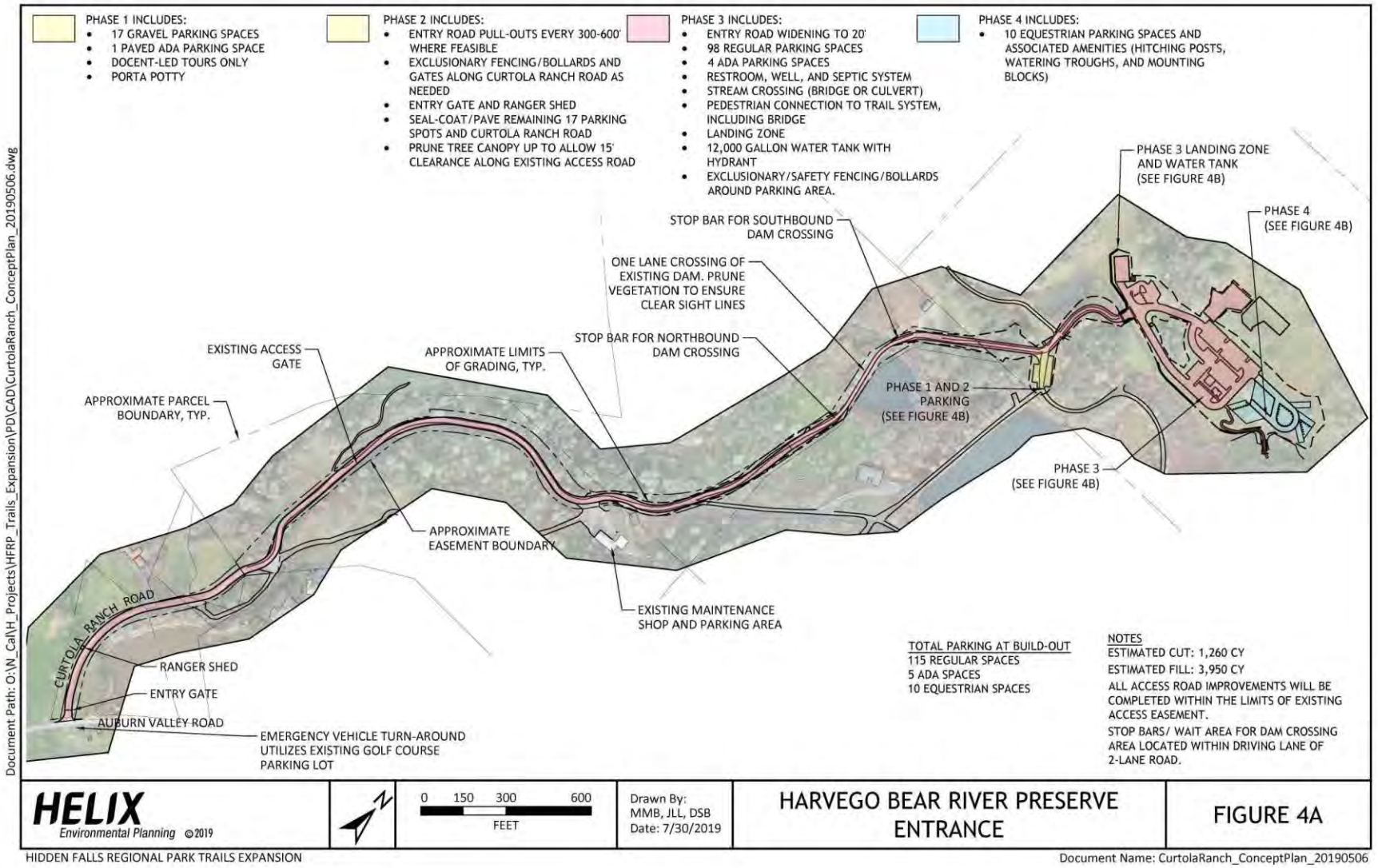
figure 7



HARVEGO BEAR RIVER PRESERVE SITE

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0090-09 RA 8/1/2019

figure 8

Project Phasing

Each development area may proceed in phases, as noted below.

Curtola Ranch Road (Harvego) area. The Phasing plans include four phases:

Phase 1 Creation of 17 regular and 1 ADA spaces with access limited to docent-led tours.

Phase 2 17 regular and 1 ADA spaces with access per reservations on a daily basis, with pull-outs.

Phase 3 102 additional regular spaces and 4 additional ADA spaces, for a total of 119 regular and 5 ADA spaces with access per reservations permit system on a daily basis with Curtola Ranch Road improved to 20-foot minimum pavements except over the dam where staging locations at each end of the one lane section will be available.

Phase 4 Addition of 10 equestrian spaces for a total of 115 regular, 5 ADA and 10 equestrian parking spaces with no additional improvements beyond Phase 3.

Garden Bar Road area. The Garden Bar area was approved in 2010 with three phases linked to improvements to Garden Bar Road. While original Phases 2 and 3 remain, as part of the project a revised phasing plan is proposed that further breaks down Phase 1 to more clearly define utilization of this area in light of the reservation permit system.

The original Phasing Plan:

Phase 1 Occasional use by "classroom sized groups" with access the site through the Garden Bar entrance with an appointment so that the gate could be opened to allow entrance. No other improvements to Garden Bar Road.

Phase 2 Unrestricted access for regular vehicle with improvements to Garden Bar Road based on 18-foot roadway width.

Phase 3 Unrestricted access for vehicles pulling trailers with improvements to Garden Bar Road based on 20-foot roadway width.

The proposed Garden Bar Road area Phasing Plan includes:

Phase 1-A 30 parking spaces used on weekends, holidays and other "high volume" days by permit with one permit per space per day. Improved signing and pavement markings would be added on Garden Bar Road.

Phase 1-B Access to 30 spaces on any day, with each space permitted to turnover as anticipated for the overall HFRP project on weekends and holidays (i.e., 45 peak day permits). Special events would be permitted by using the allocated parking and permits. "Pull outs" would be installed at key locations on Garden Bar Road where existing right of way is available and where physical constraints make it possible to widen the road.

Phase 1-C Access to 30 spaces per B PLUS the ability to concurrently accommodate a 200-person special event under a Special Event Permit Application (SEPA) required by the Parks Division for special events.

Phase 2 Access to a total of 45 regular and 5 ADA spaces under the overall HFRP reservation system limits (i.e., 83 peak day permits) with original approved Phase 2 improvements.

Phase 3 Access to a total of 45 regular, ADA and 20 equestrian spaces (i.e., 116 peak day permits) with original approved Phase 3 improvements.

Mears Drive area. No phasing plan is proposed.

Twilight Ride area. Two project phases are proposed.

Phase 1 Access to 54 regular and 4 ADA spaces and 20 equestrian parking spaces under reservation system on weekends and holidays with access as proposed.

Phase 2 Access to a total of 96 regular and 4 ADA and 40 equestrian parking spaces under reservation system on weekends and holidays with access as proposed.

Project Operating Characteristics

Parking / Reservation System Characteristics. The amount of new vehicular traffic associated with the expansion of HFRP has been estimated based on the number of parking spaces to be provided and the anticipated turnover characteristics of those spaces.

The existing HFRP reservation system is assumed to continue to be implemented on weekends and on peak weekdays, and the number of parking permits that would be issued has been identified based on current demands.

Table 9 outlines the derivation of the HFRP's Saturday traffic characteristics. As indicated, 359 new parking spaces are assumed in addition to the 70 spaces that are part of the previously approved Garden Bar Road site. This total conservatively assumes up to 60 parking spaces that might theoretically be created on private property, although these spaces are not proposed as part of the HFRP Expansion. Thus, an overall total of 429 new parking spaces could be created.

It is important to note that any future proposal for parking on private property would be subject to further environmental review which would specially consider the adequacy of access and safety. The inclusion of these possible future parking spaces is intended to provide a worst case assessment of traffic impacts.

The number of parking permits that would be issued by Placer County has also been identified. As indicated, today Placer County makes available 187 Saturday parking permits for the 113 regular and overflow spaces at the existing Mears Drive facility. The ratio of permits to spaces is 1.66 permits per space, and this ratio is assumed to continue in the future for the regular spaces created with the HFRP Expansion.

In addition, while no proposal currently exists to create new parking areas on private property outside of HFRP, this analysis conservatively assumes that parking on private property outside of HFRP will be allowed 100 park permits.

Altogether, a total of 712 parking permits have been assumed to be made available for the new areas of HFRP, in addition to the 187 permits already offered at the Mears Drive facility.

Trip Generation Forecasts. As noted in Tables 9 and 10, the daily and peak hour trip generation associated with use of new facilities has been estimated based on trip generation rates derived from observation of existing HFRP facilities. The current traffic volume above the Mears Drive parking area with the reservation system was compared to the number of available permits or parking supply and resulting trip generation rates were created on a "per permit" basis. The travel associated with turning away motorists who arrive without a permit has also been quantified based on current experience but recognizing that increasing familiarity with the reservation system should reduce the number of "turn-away's" when the expansion project is completed.

Daily Trips. As indicated, the new elements pf the HFRP expansion project, as well as trips from parking assumed on private lands are projected to generate 1,705 daily trips on Saturday and 790 daily trips on a weekday. Use of the 70 spaces already approved at the Garden Bar Road site could result in another 331 Saturday and 154 weekday daily trips. The total daily trip generation associated with proposed and approved but not built uses totals 2,036 Saturday daily and 944 weekday daily trips.

Peak Hour Trips. As shown in Tables 9 and 10, peak hour traffic volumes at HFRP are expected to be highest on Saturdays. The proposed uses would result in 179 Saturday peak hour trips, which when added to the 36 trips occurring at the approved Garden Bar Road site yields 215 new Saturday peak hour trips. On weekdays these estimates are 79 p.m. peak hour trips, 15 p.m. trips from the Garden Bar Road site and an overall total of 94 p.m. peak hour trips.

TABLE 9
HFRP EXPANSION SATURDAY TRIP GENERATION ESTIMATE

Location	Parking Spaces				Permits Available[1]	Trips per Permit				Trips			
						Daily	Saturday Peak			Daily	Saturday		
	Regular	Equestrian	ADA	Total			In	Out	Total		In	Out	Total
Proposed Project													
Twilight Ride	96	40	4	140	232	2.58[2]	33%	67%	0.27[3]	599	21	42	63
Harvego Curtola Ranch Rd	119	10	5	134	222					573	20	40	60
Mears	25	0	0	25	42					108	4	7	11
Private	57	0	3	60	100					258	9	18	27
Total	297	50	12	359	596					1,538	54	107	161
Trips caused by turn-away's without permit[4]										167	9	9	18
Project Total										1,705	63	116	179
Prior Approval not yet Constructed													
Garden Bar (Prior approval)	45	20	5	70	116	2.58	33%	67%	0.27	299	11	21	32
Trips caused by turn-away's without permit[4]										32	2	2	4
Previously approved total										331	13	23	36
Total of Proposed Project Plus Prior Approval not yet Constructed													
Total	342	70	17	429	712					1,837	65	128	193
Trips caused by turn-away's without permits[4]										199	11	11	22
Grand Total with turn-away's										**2,036**	**76**	**139**	**215**

[1] based on 187 Saturday permits offered at Mears for 113 parking space capacity = 1.66 permits per space.
[2] based on 348 daily trips at Mears on divided by 135 permits issued on June 16, 2018 = 2.58 trips per permit. The observed daily volume includes the effects of automobile – trailer combinations with multiple axels that would overstate actual vehicle trips, as well as the effect of staff travel, but no adjustment has been made in order to produce a conservative estimate.
[3] based on observed peak hour percentage of daily and directional split observed at Mears entrance.
[4] assume 1/3 the current turn-away rate observed at Mears due to increased knowledge of reservation system and improved cellular phone coverage. The current rate was 58 turn-away's out of 135 permits issued or 43%. One Third is 14%. Assume two daily trips per turn-away,

TABLE 10
HFRP EXPANSION WEEKDAY TRIP GENERATION ESTIMATE

Location	Parking Spaces				Unit	Trips per Parking Space				Trips			
						Daily	PM peak			Daily	PM Peak Hour		
	Regular	Equestrian	ADA	Total			In	Out	Total		In	Out	Total
Proposed Project													
Twilight Ride	96	40	4	140	Space	2.20[1]	27%	73%	0.22	308	8	23	31
Harvego Curtola Ranch Rd	119	10	5	134	Space					295	8	21	29
Mears	25	0	0	25	Space					55	1	5	6
Private	57	0	3	60	Space					132	4	9	13
Total	297	50	12	359	Space					790	21	58	79
Prior Approval not yet Constructed													
Garden Bar (Prior approval)	45	20	5	70	Space	2.20	27%	73%	0.22	154	4	11	15
Total of Proposed Project Plus Prior Approval not yet Constructed													
Total	342	70	17	429	Space					**944**	**25**	**69**	**94**

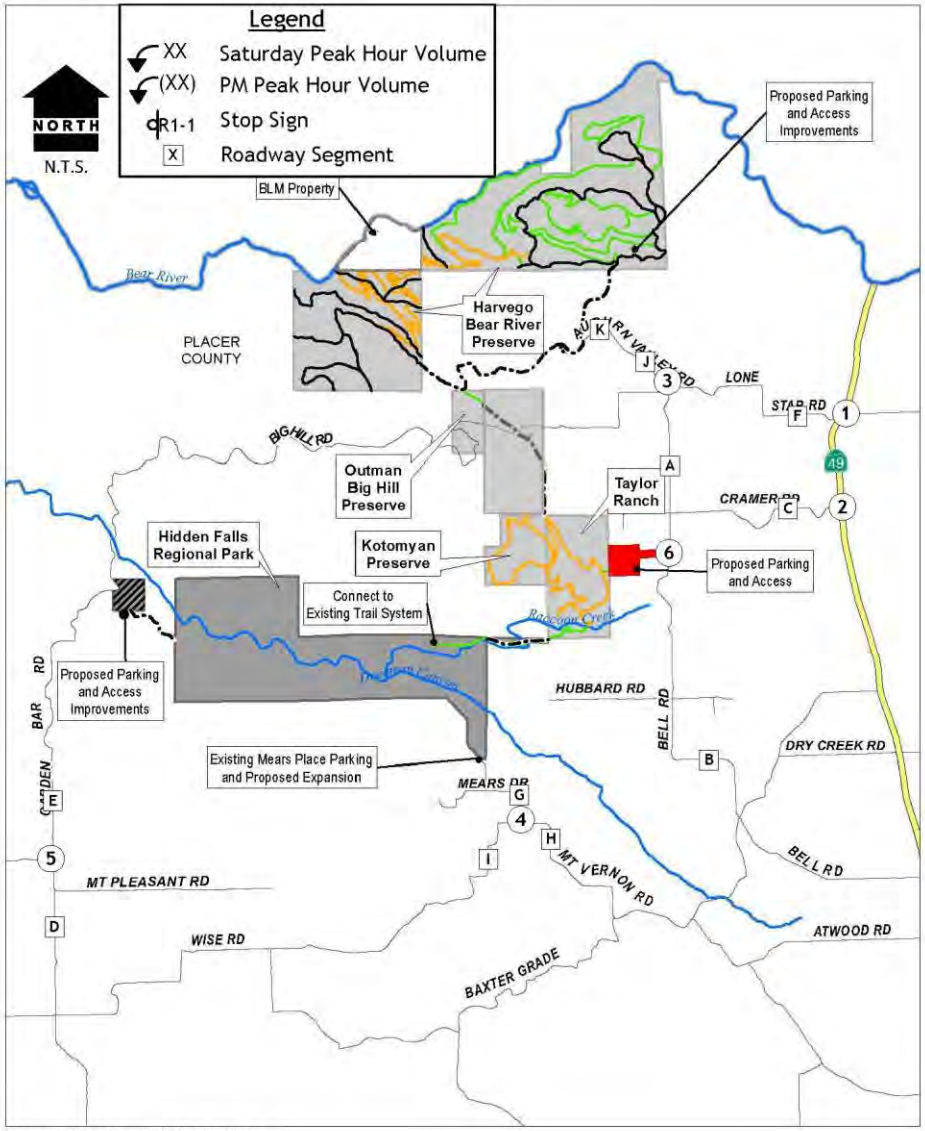
[1]Based on each space turning over once each day plus 10% for ancillary travel = 2.20 trips per space
[2]based on observed 10% in peak hour and directional split observed at Mears

Trip Distribution. Having determined the number of trips that are expected to be generated by the project, it is necessary to identify the directional distribution of project-generated traffic. For rural recreational facilities the distribution generally reflects the population distribution with area served by the facility. Because HFRP is a regional attraction, on weekends many trips originate in the Sacramento / Roseville area, which has a much larger population than the local Auburn area, with lesser shares traveling from areas to the north and east. Table 11 identifies the weekend directional distribution assumptions made for this analysis. Midweek characteristics would likely be similar but the share of trips originating locally would be greater.

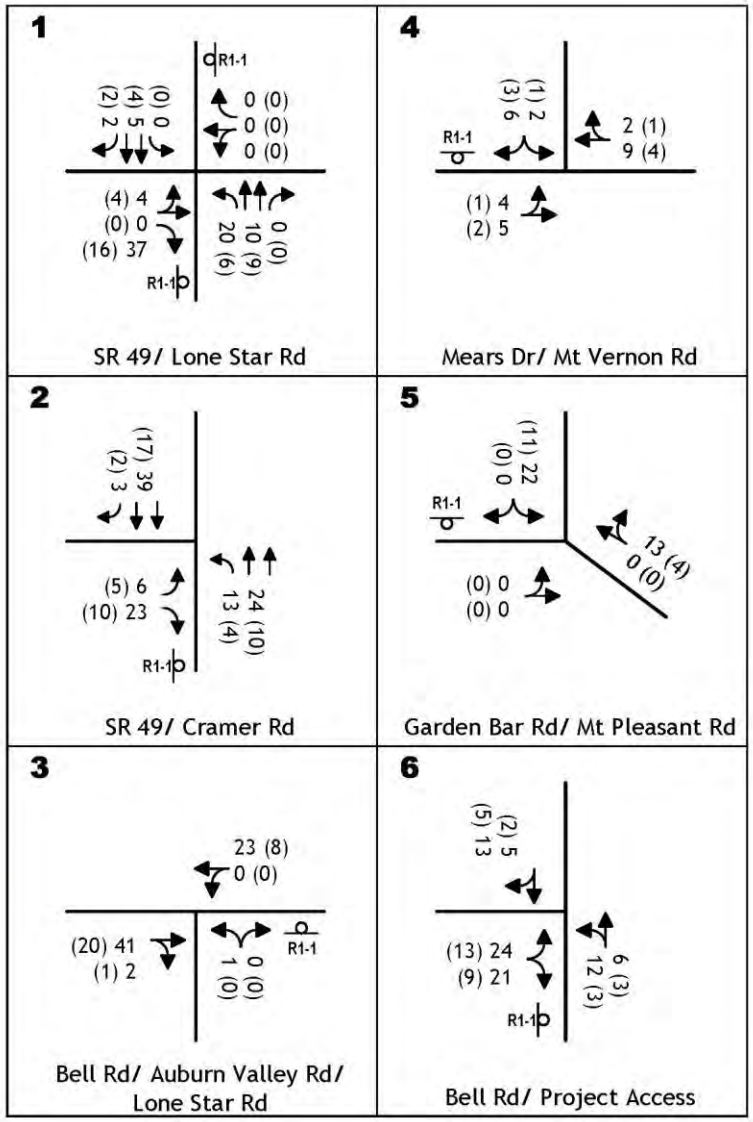
TABLE 11
PROJECT TRIP DISTRIBUTION ASSUMPTIONS

Direction	Route	Percent of Total
North	SR 49 north of Lone Star Road	5%
	SR 65 north of Wise Road	5%
East	Auburn	20%
West-South	Sacramento / Roseville / SF Bay Area	70%
Total		100%

Project Trip Assignment. The assignment of project traffic to the local area street system will reflect the alternative routes available between various areas of HFRP and ultimate destinations. The choice of access route was determined based on the relative difference in travel time along each route. Using the regional trip distribution assumptions noted previously, project trips were assigned to the local street system based on the least time path to each destination. Figure 9 presents resulting "project only" traffic for the trips associated with proposed and approved but unbuilt HFRP uses.



Source: Placer County 2017, PLT 2017



PROJECT ONLY TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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figure 9

Existing Plus Project Traffic Conditions and Levels of Service

Roadway Segment Level of Service. Table 12 identifies the amount of daily traffic added to study area roads by the project at full build out and compares Existing and Existing Plus Project volumes. As indicated, the addition of project traffic does not result in any roadway segment operating with a Level of Service that exceeds the applicable minimum LOS C/D standard.

Intersection Level of Service. Figure 10 superimposes trips caused by the operation of new and approved HFRP uses onto current background traffic volumes. Table 13 compares the existing and "Plus Project" Levels of Service at study intersections. As indicated the addition of project trips does not result in any additional intersections operating with a Level of Service that exceeds the adopted minimum standard.

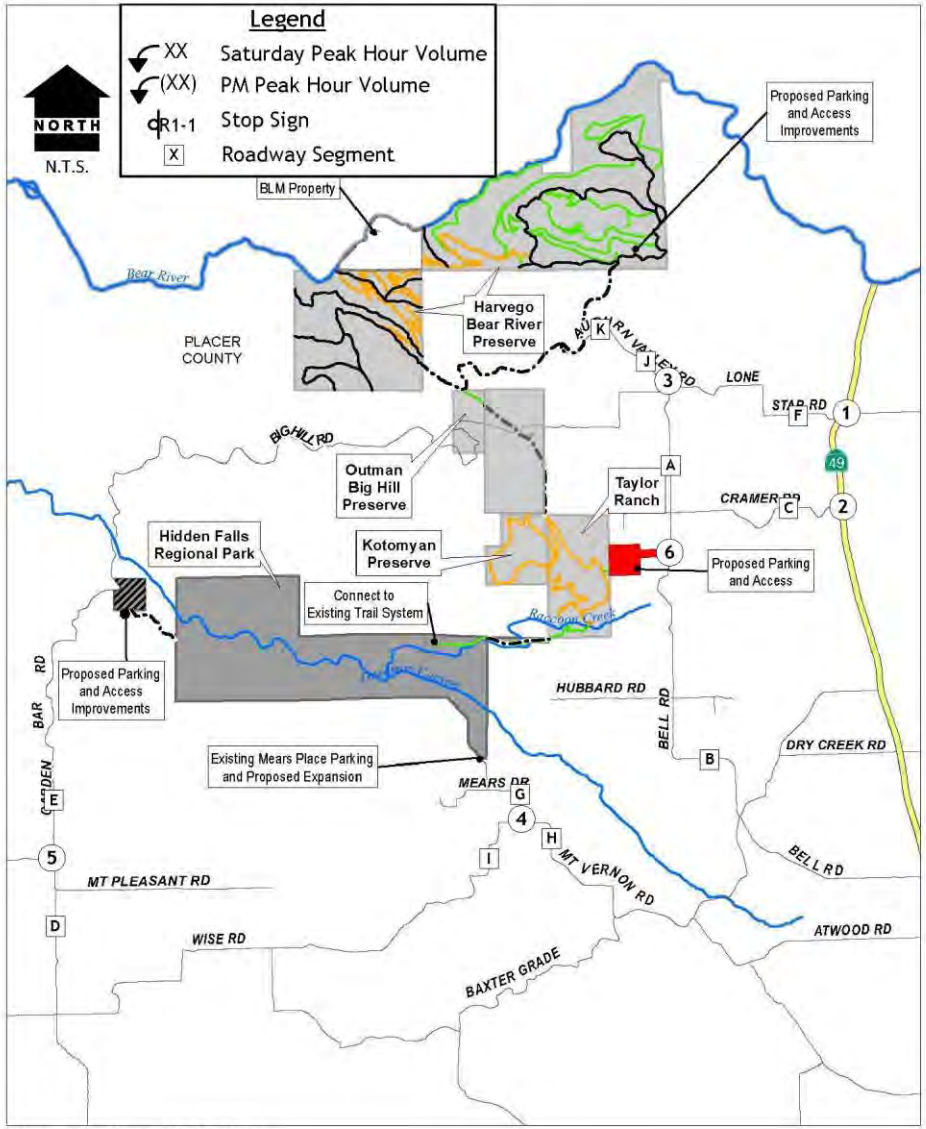
The **SR 49 / Lone Star Road intersection** will continue to operate with an overall Level of Service that exceeds the LOS D minimum. Because conditions exceed the minimum LOS standard with and without the HFRP project, the significance of the impact is determined based on 1) change in overall average delay and 2) satisfaction of peak hour traffic signal warrants. In this case, while the incremental change in delay caused by the project exceeds the 2.5 seconds allowed under Placer County criteria, rural peak hour traffic signal warrants are not satisfied. Because both criteria must be met under County guidelines, the impact is not significant.

Traffic Signal Warrants. Existing Plus Project traffic volumes were compared to peak hour warrant requirements to determine whether the addition of project trips results in the need for signalization. No study intersection will carry volumes that reach a level that satisfy warrants.

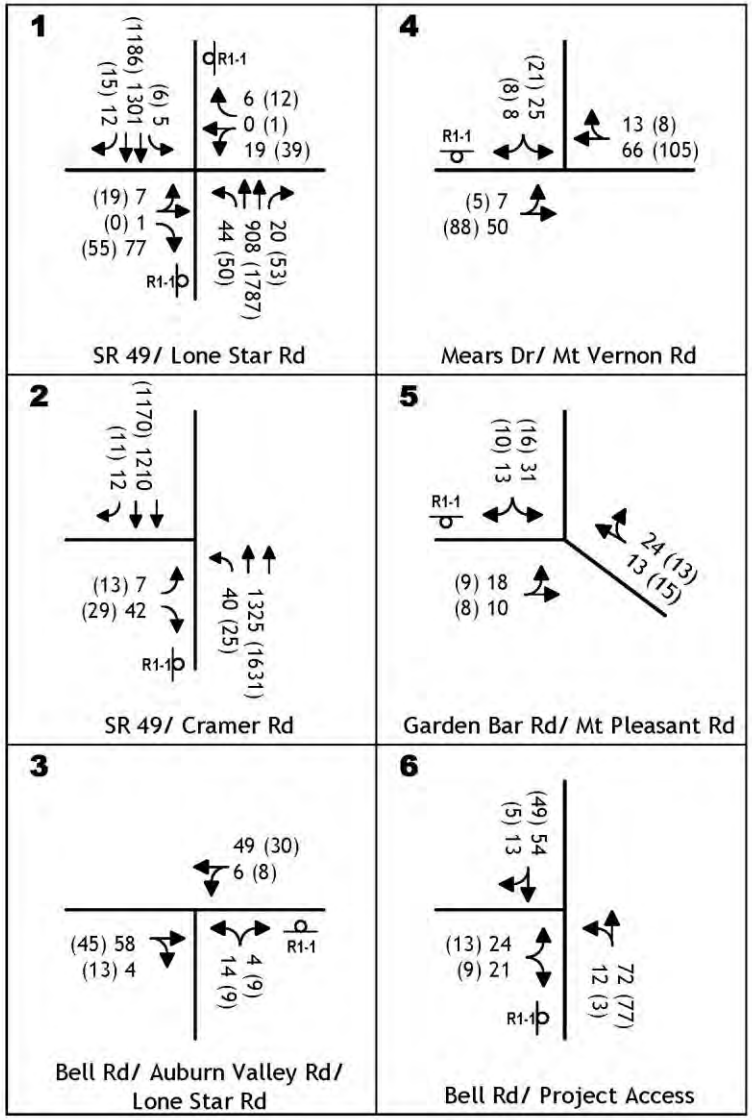
TABLE 12
EXISTING PLUS PROJECT ROADWAY SEGMENT TRAFFIC VOLUMES AND LEVEL OF SERVICE

#	Road	Location	Class	Roadway Volume and Segment Level of Service									
				Weekday					Saturday				
				Existing		Existing Plus Project			Existing		Existing Plus Project		
				Daily Volume	LOS	Daily Volume		LOS	Daily Volume	LOS	Daily Volume		LOS
						Project	Total				Project	Total	
Public Roads													
A	Bell Rd	Lone Star Rd to Cramer Rd	RC	614	A	14	628	A	543	A	34	577	A
B	Bell Rd	Joeger Rd to Cramer Rd	RC	1,400	A	200	1,600	A	1,329	A	402	1,731	A
C	Cramer Rd	Bell Rd to SR 49	Local	558	A	177	808	A	548	A	407	955	B
D	Garden Bar Road	Wise Road to Mt. Pleasant Road	Local	748	A	100	848	A	691	A	215	906	A
E	Garden Bar Road	Mt. Pleasant Road to Park Entrance	Local	318	A	154	472	A	316	A	331	647	A
F	Lone Star Rd	Bell Rd to SR 49	Local	1,328	A	280	1,608	A	1,223	A	630	1,853	B
G	Mears Drive	Mt. Vernon Road to Park Entrance	local	493	A	56	649	A	790	A	120	910	A
H	Mt. Vernon Rd	Mears Drive to Meyers Lane	RC	2,010	B	80	2,090	B	2,679	B	168	2,847	B
I	Mt. Vernon Rd	Ayers Holms Road to Buffalo Road	RC	1,714	A	96	1,810	A	1,328	A	216	1,744	A
Private Roads													
J	Auburn Valley Road	Bell Road to View Ridge Drive	Local	935	A	294	1,229	A	884	A	664	1,548	A
K	Auburn Valley Road	Fairway Court to Curtola Ranch Road	Local	295	A	294	589	A	399	A	664	1,063	A

BOLD values exceed LOS C. **HIGHLIGHTED** values are a significant impact



Source: Placer County 2017, PLT 2017



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EXISTING PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

figure 10

TABLE 13
EXISTING PLUS PROJECT INTERSECTION LEVELS OF SERVICE

#	Location	Control	Weekday PM Peak Hour				Saturday Peak Hour			
			Existing		EX Plus Project		Existing		EX Plus Project	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	SR 49 / Lone Star Road	EB/WB Stop								
	(overall)		**(106.3)**	**(F)**	**(110.3)**	**(F)**	**(93.4)**	**(F)**	**(101.2)**	**(F)**
	Eastbound approach		103.5	F	120.2	F	26.0	D	31.2	D
	Westbound approach		>300	F	>300	F	195.6	F	298.8	F
	Northbound left turn		11.9	B	12.0	B	12.9	B	13.3	B
	Southbound left turn		16.5	C	16.6	C	10.2	B	10.3	B
2	SR 49 / Cramer Road	EB Stop								
	(overall)		(15.6)	(C)	(16.9)	(C)	(13.0)	(B)	(15.5)	(C)
	Eastbound approach		18.8	C	20.05	C	14.6	B	17.9	C
	Northbound left turn		11.3	B	11.5	B	11.8	B	12.3	B
3	Bell Rd/Auburn Valley Rd/Lone Star Rd	EB Stop								
	(overall)		(8.5)	(A)	(8.7)	(A)	(8.3)	(A)	(9.0)	(A)
	Eastbound approach		8.8	A	9.0	A	9.0	A	9.4	A
	Northbound left turn		7.3	A	7.3	A	7.3	A	7.4	A
4	Mt. Vernon Road / Mears Drive	SB Stop								
	(overall)		(9.5)	(A)	(9.5)	(A)	(9.2)	(A)	(9.1)	(A)
	Southbound approach		9.8	A	9.8	A	9.4	A	9.5	A
	Eastbound left turn		7.5	A	7.5	A	7.4	A	7.4	A
5	Mt. Pleasant Road / Garden Bar Road	SB Stop								
	(overall)		(8.1)	(A)	(8.4)	(A)	(8.1)	(A)	(8.7)	(A)
	Southbound approach		8.6	A	8.8	A	8.8	A	9.2	A
	Eastbound left turn		7.3	A	7.3	A	7.3	A	7.4	A
6	Bell Road / Twilight Ride Access	EB Stop	-	-			-	-		
	(overall)				(8.8)	(A)			(8.9)	(A)
	Eastbound approach				9.1	A			9.3	A
	Northbound left turn				7.3	A			7.4	A

(XX) is overall weighted average delay and LOS for those movements yielding right of way
BOLD values exceed minimum overall LOS standard **HIGHLIGHTED** values are a significant impact

Project Access

The Garden Bar Road and Twilight Ride project areas create new access onto local public roads, and the adequacy of these access points has been considered with regards to applicable safety and design standards.

Description. The characteristics of the two access points have been identified. The ***Garden Bar Road access*** is planned at a location previously evaluated as part of the preceding EIR and approved on Garden Bar Road. As noted in the site illustration, the new connection is located within a tight horizontal curve at a location that allows exiting traffic to have views in each direction. No further analysis of this access is required.

The ***Twilight Ride site access*** is located on Bell Road roughly 1,800 feet south of the Cramer Road intersection. The site frontage is at the southern end of a long straight section of Bell Road, and the road curves to the right in the area beyond the project frontage.

Sight Distance at Twilight Ride Access. The available sight distance at Twilight Ride access point was determined through engineering evaluation of the proposed site plans and was then compared to applicable Placer County standards (Plate 116) for access to public roads. Placer County typically designs left turn lanes based on the greater of the posted speed limit and the observed 85th percentile speed. As noted earlier, the speed limit on Bell Road is 35 mph, and Placer 116 requires 440 feet of sight distance from a location measured 15 feet from the edge of the travel way. However, Plate 116 notes that "*where restrictive conditions do not allow compliance with the specific sight distance requirements the engineer may approve a reduction of the corner sight distance to no less than the minimum sight distance as outlined in the Caltrans Highway Design Manual (HDM).* HDM table 201.1 notes that the minimum stopping sight distance at 40 mph is 300 feet.

Because Bell Road is straight north of the proposed access, the view looking left to the north will satisfy the Plate 116 requirement. Looking right to the south, the alignment of Bell Road curves, and the view along the sight line required by Plate 116 would pass through existing brush on the project site and then cross a portion of the adjoining parcel. To meet Plate 116 requirements the brush will need to be trimmed, and it will be necessary to ensure that no new obstructions develop along the line of site access the adjoining parcel. This view is behind the fence and may lie within the existing public right of way or may cross private property depending on the location of right of way in this area. The minimum stopping distance requirement of 300 feet can be provided but could still require a view across a smaller potion the adjoining parcel.

The Twilight Ride plan includes the alternative of creating project access at the parcel's current driveway further north. This location is farther from the curve on Bell Road, and Plate 116 requirements could be met looking south without the view crossing the adjoining parcel.

Twilight Ride Access Improvements - Plate 116 Approach Tapers. Plate 116 also requires that rural roads be developed with approach tapers that provide space for turning motorists to

decelerate outside the flow of through traffic and to accommodate the turning requirements of trucks and vehicles pulling trailers. As a practical matter these features also provide "wayfaring" assistance to motorists by differentiating between the design of commercial driveways and the design of access to individual private residences. Plate 116 guidelines for 40 mph design require 40-foot radius curve returns and 150-foot long approach tapers in advance of the returns in each direction. As a practical matter, Placer County has in the past approved new access in restricted areas with improvements that deviate from Plate 116 improvement requirements.

At the Twilight Ride site the centerline of the proposed access location is roughly 80 feet from parcel's southern boundary. Thus the 150 foot taper would begin along the edge of pavement roughly 122 feet south of the property line and widen to about 8 feet at the property line. Depending on the right of way location in this area, this work may encroach into the adjoining parcel. A shorter taper may be needed to avoid encroaching into the adjoining parcel, and this deviation from Plate 116 would require approval from Placer County's Director of Public Works.

The alternative Twilight Ride access location appears to have a similar constraint as this driveway location adjoins the parcel's northern boundary. Deviation from the Plate 116 guideline may be needed in this location as well.

Need for Left Turn Lanes at Twilight Ride Access. The extent to which a separate left turn lane will be justified at the project's Twilight Ride access point has been investigated based application of published criteria to long term cumulative volumes occurring in the Saturday peak hour.

The methodology employed by Placer County and other public agencies was used to quantitatively determine whether left turn lanes are justified at un-signalized intersection. The American Association of State Transportation and Highway Officials (AASHTO) have identified guidelines for the installation of left turn lanes in their publication *A Policy on Geometric Design of Highways and Streets*. AASHTO guidelines take two forms. These guidelines are presented the 11th Edition (2011) in their Exhibit 9-29 and Table 14 and base the need for a left turn lane on the volume of approaching and opposing traffic on the mainline road and the relative percentage of that traffic that turns. These criteria are applicable to intersections where the major street traffic proceeds freely and side street traffic is controlled by stop signs.

The AASHTO publication was updated in December 2018 and different guidelines are now available. The new guidelines suggest that a left turn lane could be beneficial based on the volume of traffic turning and the total volume per lane on the street. This guidance is presented in their Figure 9-36 Table 15 which follows. These guidelines also suggest volume thresholds for creation of a "bypass" lane that, absent a full turn lane, would allow through traffic to proceed around a vehicle stopped to turn left at a "tee" intersection. The information supporting the 2018 guidelines note, however, that *The volume based guidelines or warrants presented below indicate situations where a left turn lane may be desirable, not necessarily situations where a left-turn lane is definitely needed.*

TABLE 14
ASSESSMENT OF JUSTIFICATION FOR LEFT TURN LANES
UNDER 2011 AASHTO

Opposing Volume (veh/hr)	Advancing Volume (veh/hr)			
	5% Left Turns	10% Left Turns	20% Left Turns	30% Left Turns
40-mph operating speed				
800	330	240	180	160
600	410	305	225	200
400	510	380	275	245
200	640	470	350	305
100	720	515	390	340
95		**119**	**119**	

Source: *A Policy on Geometric Design of Highway and Streets, AASHTO, 2011.*
RED values are CUMULATIVE Plus Project Saturday Volumes at Twilight Ride access

TABLE 15
ASSESSMENT OF JUSTIFICATION FOR LEFT TURN LANES
UNDER 2018 AASHTO

Left Turn Lane Volume (VPH)	Major Road Two-Lane Highway Peak-Hour Volume (VPH/Lane)	
	Three-Leg Intersection	Four-Leg Intersection
	Warrants a Left Turn Lane	Warrants a Left Turn Lane
5	200	150
10	100	50
12	**104**	**-**
15	100	50
20	50	<50
25	50	< 50
30	50	< 50
35	50	< 50
40	50	< 50
45	50	< 50
50 or more	50	< 50

Source: *A Policy on Geometric Design of Highway and Streets, AASHTO, 2018.*
RED values are CUMULATIVE Plus Project Saturday Volumes at Twilight Ride access

As noted in Table 14, the volume of traffic anticipated at the Twilight Road access falls well below the level justifying a left turn lane under 2011 AASHTO guidelines. Alternatively, the projected cumulative plus project Saturday volumes do satisfy the 2018 AASHTO warrant. Placer County has considered the need for left turn lanes on rural roads as part of consideration of other development proposals. Factors such as the frequency of volumes reaching warrants levels, the availability of adequate sight distance and the nature of motorists attracted to the site are considered. In this case, a left turn lane would be desirable since many motorists visiting HFRP may be unfamiliar with the local road system***. A left turn lane will be required at the Twilight Ride site.***

The extent to which a portion of Twilight Ride can be operated without a left turn lane has been considered. Based on Table 15 a left turn lane would not be needed when the left turn volume was fewer than 10 left turns per hour. Proportionately 9 left turns represent 75% of the left turn demand at full occupancy. Therefore 75% of the Twilight Ride parking supply could be created before a left turn lane was needed.

The characteristics of an applicable left turn lane can be determined from the guidelines contained in Chapter 4 the Caltrans Highway Design Manual (HDM). Under HDM guidelines the lane and it entry bay taper should be long enough to accommodate storage for a two-minute accumulation of turning cars, or a minimum of two vehicles. In addition, the lane and bay taper should also provide space for deceleration, which in the case of 40 mph design is 315 feet. HDM guidelines do allow a reduction in deceleration speed at the bay taper of up to 20 mph, which would reduce the deceleration requirement appreciably. A full 40 mph design would have a bay taper and lane that totaled 365 feet. Assuming that the deceleration distance into the pocket to the back of queue from 20 mph was 150 feet, the bay taper and pocket could be as short as 200 feet. The final left turn lane design will need to meet Placer County requirements.

In addition to the lane itself, a transition area is needed at each end to create the lane. Depending on whether the lane is created by widening on one or both sides of centerline, these transitions are 320 or 160 feet long for 40 mph design.

Impacts Caused by Project Phasing

With the exception of the Mears site improvements, each of the three HFRP areas is expected to be developed in phases, and the ramifications of phased development are noted below.

Curtola Ranch Rd (Harvego) Phasing. The traffic impacts associated with phased implementation of the Curtola Ranch site have been evaluated.

Phase 1 Access is permitted to 17 regular and 1 ADA spaces on weekends and holidays under the control of docent-led tours. Assuming each space turns over once, this level of activity would generate 36 daily trips. This use level would be similar to that occurring with the current site visitation conducted by the Conservancy. Roughly 3 to 5 times each year docent lead tours of 5 to 15 vehicles have visited the area. Under this phase the project will add traffic to a roadway that

in selected locations cannot accommodate concurrent two-directional travel. However, because no other traffic uses that portion of the road and all traffic will enter or exit at once, this level of activity can be accommodated safely.

Phase 2 Access is permitted to 17 regular and 1 ADA spaces with each space permitted to turnover as anticipated for the overall HFRP project (i.e., 30 permits. Pull outs would be constructed along Curtola Ranch Road. Saturday traffic would total 86 daily trips (i.e., 78 trips by guests and 8 trips by "turn-away's". This use level would not require full roadway widening, but because project traffic will increase the possibility of opposing vehicles meeting on narrow segments of Curtola Ranch Road, "pull outs" should be installed at key locations where physical constraints make it possible to widen the road somewhat. Ideally pull-outs would be installed within the areas of sight distance limitation on horizontal curves, and they would provide room for a vehicle outside of the two-lane travel way. However, it may not be possible to widen Curtola Ranch Road to that extent nor to place pullouts at all optimal locations due to physical constraints. Pullouts should be accompanied by applicable signs. At a minimum the pull-out width should increase the total roadway width (including pullout) to 18 feet to allow vehicles to pass. Pullouts should be provided on 300-600 foot spacing.

Phase 3 Another 102 regular and 4 ADA spaces would be added for a total of 119 regular and 5 ADA spaces that will be available with access per reservations permit system on weekends and holidays (206 permits). All proposed roadway improvements will be installed, and Curtola Ranch Road will be improved to 20 foot minimum pavement, except over the dam where staging locations at each end of the one lane section will be available. This level of activity would result in 589 daily trips (i.e., 531 trips by guests and 58 trips by "turn-away's").

Phase 4 10 equestrian spaces will be added for a total of 119 regular, 5 ADA and 10 equestrian parking spaces that will be available with access per reservations permit system on weekends and holidays (222 permits). No additional roadway improvements will be made.

Garden Bar Road Site Phasing. The original Garden Bar Road area approvals included three phases. The existing Conditional Use Permit (CUP) for HFRP allows for a parking area that would be accessed via Garden Bar Road. The 2010 EIR contained a detailed phased plan to develop parking in this area that included within Phase 1 a public access gate, connecting roadway to the existing access road, fencing and cattle guards on the access road, along with a staging area. Phase 1 permitted "occasional classroom sized groups" to access the site through the Garden Bar entrance with an appointment so that the gate could be opened to allow entrance. Subsequent phases 2 and 3 allowed regular access with staged Garden Bar Road improvements to address regular vehicle access and subsequently vehicles pulling trailers, respectively.

The proposed Garden Bar Road Phasing plan addressed by this project makes use of the reservations system to accommodate initial use with limited Garden Bar Road improvements and creates three initial phases which are evaluated below.

Phase 1A. Access would be permitted to 25 regular spaces and five ADA spaces on weekends and holidays only with each space only allowed one occupant per day (i.e., 30 permits). This phase would generate 85 daily trips at the assumed trip generation rate (i.e., 77 guest trips and 8 "turn-away's"). This interim scenario adds a minimal amount of additional traffic to Garden Bar Road. As the last EIR anticipated 56 daily trips for "classroom size events" the trip generation for phase 1A is similar to the forecast for the permitted use. With implementation of the County's reservation system it is unlikely that weekend traffic would be concentrated into any particular time period. As a result, major roadway improvements are not needed but measures to provide motorists with additional information about the conditions on Garden Bar Road should be provided through pavement markings, signing and tree trimming to improve sight distance. Additional traffic control devices (i.e., signing and markings) that address the locations where sight distance is limited and pavement width is narrow will be applicable. The exact location of signing and markings would be determined by Placer County staff.

Phase 1B. No additional parking would be created, and access is permitted to 30 spaces on any day with each space permitted to turnover as anticipated for the overall HFRP project (i.e., 50 peak day permits). Saturday traffic would total 143 daily trips (i.e., 129 guest trips plus 14 "turn-away's"). Special events would be permitted by using the available parking and permits. This scenario results in daily trip generation which exceeds that forecast for "occasional classroom sized events" in the 2010 DEIR but is less than that previously forecast in the 2010 EIR for regular operation of the Expansion (i.e., 255 weekday and 460 Saturday daily trips). With the County's reservation system it is unlikely that trips will be concentrated to short time periods. While the major improvements identified in the DEIR (i.e., overall improvements to provide 18' pavement width) are not required at this traffic volume level, operational controls and safety improvements are justified.

The signing and marking measures and tree maintenance needed for phase 1-A remain applicable. Because project traffic will increase the possibility of opposing vehicles meeting on narrow segments of Garden Bar Road, paved "pull outs" should be installed at key locations on Garden Bar Road where existing right of way is available and where physical constraints make it possible to widen the road somewhat. Ideally pull-outs would be installed near the top of crest vertical curves or within the areas of sight distance limitation on horizontal curves, and they would provide room for a vehicle outside of the two-lane travel way. However, it may not be possible to widen Garden Bar Road to that extent nor to place pullouts at all optimal locations due to physical constraints. Pullouts would be a priority in the areas of very narrow pavement width (i.e., less than 16 feet of pavement). Pullouts should be accompanied by applicable signs. At a minimum the pull-out width should increase the total roadway width (including pullout) to 18 feet to allow vehicles to pass. Pullouts should be provided on 300-400 foot spacing in these areas, and eight to ten pullouts should be anticipated along Garden Bar Road.

Phase 1-C. Access is permitted to 30 spaces per B PLUS the ability to concurrently accommodate a 200-person special event under a SEPA. Assuming private automobiles @ 2.5 persons per vehicle an event could add 160 additional daily trips to the Phase 1B estimate for a total of 303 daily trips.

The daily trip generation forecast for this scenario exceeds the 2010 DEIR's weekday projections for regular operation of HFRP and is less than the DEIR's forecast for weekday conditions. The forecast assumes that 80 vehicles would be traveling to a special event, and because this traffic could be concentrated into relatively short periods before and after an event, this traffic could be managed under a temporary event permit using traffic control personal as needed. An event would be accompanied by a Traffic Management / Control Plan that required by the Parks Division.

Phase 2. Access is permitted to a total of 45 regular and 5 ADA spaces under the overall HFRP reservation system limits (i.e., 83 peak day permits generating 236 daily trips). This forecast is less than the 2010 DEIR estimate for Garden Bar Road site (i.e., 460 Saturday trips). This phase would be accompanied by the improvements included under the current permit (i.e., 18' widening.

Phase 3 Access is permitted to 45 regular, 5 ADA and 20 equestrian spaces (i.e., 116 peak day permits generating 337 daily trips) which is full buildout. This forecast is less than the 2010 DEIR estimate for Garden Bar Road site (i.e., 460 Saturday trips). This phase would be accompanied by the improvements included under the current permit (i.e., 20' widening) for access by vehicles pulling trailers.

Twilight Ride Site Phasing. The traffic impacts associated with phased implementation of the Twilight Ride site have been evaluated.

Phase 1 Access to 50 regular spaces four ADA and 20 equestrian spaces with each space turning over per the HFRP reservation system (123 permits) would result in 351 daily trips on Saturday (i.e., 317 trips by guests and 34 trips by "turn-away's") . This phase represents 53% of the total planned parking supply. As noted in the preceding discussion of site access, because a left turn lane is not needed until 75% of the parking supply is available, a left turn lane would not be required with this phase. Other access improvements under Plate 116 would be installed, and off-site safety and overflow parking mitigations would need to be implemented.

Phase 2 Construction of 48 additional regular spaces, and 18 more equestrian spaces for a total of 96 regular, 4 ADA and 40 equestrian spaces, which represents full development of this area. All access improvements, including the left turn lane on Bell Road, would be completed.

Impacts to Alternative Transportation Modes

The extent to which the proposed project may impact pedestrian and bicycle circulation has been considered from the standpoint of the additional use of existing alternative facilities by persons visiting HFRP as well as the incremental increase in conflicts between pedestrians/bicyclists/ automobiles created by project vehicle trips.

Pedestrians. While the rural location of existing and proposed HFRP facilities would suggest that the project would be unlikely to generate appreciable pedestrian activity, experience over the history of HFRP suggest that pedestrians could walk to future sites from off-site parking locations if measures are not taken to limit this activity. When the Mears Drive site opened initially overflow parking demand spilled over onto adjoining streets and generated pedestrians walking to and from the park. Because pedestrian facilities were not available and road width was insufficient for concurrent two-way automobile travel and pedestrians Placer County responded by installing numerous "No Parking" signs on the roads around the park and, more recently, instituted the peak day reservation which in combination with gated access reduced the likelihood of pedestrians.

The current operation assumptions for the expanded HFRP assume that access to all areas will continue to be managed and limited on peak days. Parking lot access would not be controlled on low demand days, with the expectation that the available parking spaces will exceed demand with little reason for visitors to park off-site. However, there is no guarantee that occasionally visitors may not elect to park along the roads adjoining park entrances. Pedestrian traffic along roads that lack applicable facilities for this activity and two-way automobile travel is a potential safety issue. While not expected to occur, this impact could be mitigated by installing 'No Parking" restrictions if the need arises.

Bicycles. To the extent that HFRP visitors might elect to ride to HFRP, the project could generate additional bicycle traffic on study area roads. As noted in the existing setting, study area roads are used frequently by recreational bicyclists who share the roads which lack bicycle lanes or wide paved shoulders. It is important to note that off-road cyclists who would use HFRP facilities would not ride their bicycles to the site. While the amount of regular bicycle activity that might be generated by HFRP visitors is unknown, the project will incrementally contribute to the use of study area roads for this purpose.

Alternatively, the project will add automobile traffic to rural roads that are already used by bicyclists. As noted in Table 12, the HFRP project could increase the traffic volume on rural roads by up to 664 vehicles per day. However, the amount of traffic added to these roads does not result in a capacity deficiency as measured in terms of roadway segment Level of Service, and the traffic increase would not appreciably worsen the existing situation for bicyclists.

The existing Placer County CIP Benefit Districts that encompass the areas around HFRP have identified funds towards the costs for improvements to many rural arterial and collector roads. As noted later in this report in Table 16 (Placer County CIP Benefit District Projects), these improvements range from shoulder widening to road realignment. Roads that are affected include:

- Mt. Vernon Road
- Bald Hill Road
- Crater Hill Road
- Chili Hill Road
- Lozanos Road
- Wise Road

These improvements could also improve bicycle safety in this area, although only the Mt. Vernon Road improvement addresses a road that provides direct access to HFRP.

Automobile Safety Impacts

Collision Frequency – County Roads. The project will add traffic to the existing Placer County roads surrounding the project, and most of these roads do not meet current standards for the design of new streets. Incrementally, any traffic increase is likely to result in a proportionate increase in the number of collisions based on historic accident frequency rates. For example, the project could add 250 (weekday) to 480 (Saturday) vehicles per day to Cramer Road. This represents an increase of roughly 45% in the current weekday volume and 88% of the current Saturday volume occurring between Bell Road and SR 49. As noted earlier, 3 collisions have occurred over the last 3 years in this area. After accounting for weekly traffic variation, the traffic volume increase accompanying the project could result in another 0.6 collisions per year. Similarly, the project's traffic increase on Lone Star Road would represent 22% of current weekday and 52% of current Saturday traffic, and because the collision experience on this road is lower, the project could result in another 0.10 collisions per year.

The project will add traffic to a roadway that experiences collisions at a rate that exceeds the statewide average for similar facilities, and as a result ***the project's impact to safety on Cramer Road is considered to be potentially significant.***

Measures to improve safety and reduce future collisions on Cramer Road were considered. Because no apparent patterns for collision types or locations were identified, general improvements were considered including:

- Evaluate existing traffic control devices for conformity with the current MUTCD and upgrade as needed for consistency or for condition. This measure could also be applied to other applicable streets that are not being addressed this summer by the County's Safety Audit Program, such as Lone Star Road.
- As part of long-range planning consider improvements that reduce the volume of traffic on Cramer Road. For example, the plan for SR 49 roundabouts could involve new roundabout intersections at Lone Star Road and Lorensen Road with a continuous raised median between these locations. Thus access at the SR 49 / Cramer Road intersection may be limited to right turns in and out only, and this measure would reduce the amount of background traffic on Cramer Road as well as the amount of HFRP project traffic.

Summary of Existing Plus Project Impacts / Mitigations

Capacity. The project itself does not result in significant traffic impacts based on the capacity standards of significance adopted by Placer County for intersections and roadways. No mitigation is required for Level of Service impacts.

Pedestrian Safety. While the existing peak period reservation system and gated access will reduce the likelihood of visitors parking off site and causing pedestrian travel along rural roads, there is no guarantee that visitors may not occasionally elect to park off-site on days when access is not controlled. ***Pedestrian travel between off-site parking and HFRP could create automobile / pedestrian safety conflicts that would be a potentially significant impact.*** This impact can be mitigated by monitoring conditions at park entrances once the facilities are in operation and installing "no parking" signs on streets near the HFRP entrances where needed.

Bicycle Safety. The project will add traffic to rural roads which do not meet current Placer County design standards, however the amount of traffic added is not large enough to appreciably increase conflicts between bicycles and automobiles, and the project's impact to bicycles is not significant.

Automobile Safety. The HFRP will add vehicular traffic to one road (Cramer Road) which already experiences collisions at an annual rate that exceeds the statewide average. ***This is a potentially significant safety impact.*** Because the nature of the three collisions that have occurred on Cramer Road over the last three years does not point to the need for specific localized improvement, applicable mitigation is review of the traffic control devices in the area with upgrade to meet current MUTCD standards for message, location and sign condition if necessary.

Design of Twilight Road Site Access to Bell Road. The volume of traffic turning at the new access at buildout satisfies current AASHTO guidelines for determining the benefit of separate left turn lanes. ***Thus, operating the project without applicable access improvements is potentially significant safety impact.*** Applicable mitigation includes frontage improvements per standard Plate 116 and installing a separate northbound left turn lane on Bell Road at the access with Phase 2.

CUMULATIVE TRAFFIC IMPACTS

Background

The cumulative impact analysis considers the relative impact of the proposed project within the context of long term traffic conditions in the study area. In addition to the proposed project, the analysis of long term cumulative impacts considers the combined effect of regional traffic growth on study area roads, trips associated with other reasonably foreseeable development proposals.

Background Traffic Volume Growth. Local agencies have various resources available for estimating background growth regional transportation facilities. In the case of this study area, the area is generally addressed by the original Placer County regional travel demand forecasting model, as well as subsequent models derived from the Placer County model and created for the North Auburn area, for the City of Lincoln and for the Town of Loomis. These models account for the regional effects of development throughout the SACOG multi-county region. Each model includes known development projects in the County such as Bickford Ranch and reflects development that is consistent with adopted General Plans. For example, the model maintained by the City of Lincoln reflects development of that community's new Villages, while the Loomis model reflects development on the Village at Loomis site.

Because the HFRP area is rural with relatively limited development prospects, Placer County staff reviewed model results and the configuration of each model with regards to the level of detail provided and the reliability of forecasts to determine the best approach for this analysis. Placer County staff also reviewed available traffic studies and Caltrans planning documents and compared traffic model results to historic traffic volume counts on study area roads. Based on this comprehensive review, Placer County staff determined that the best approach yielding conservative results while incorporating the effects of growth in all jurisdictions would assume a uniform annual growth rate of 2.0% on each roadway segment. The resulting 20-year growth factor (i.e., 1.49) has been applied to the traffic volume on each roadway and at study intersections.

Reasonably Foreseeable Projects. Placer County Planning staff considered the extent of other development projects that might add traffic to the study area that would not reasonably be addressed by a background growth rate. For this analysis it was assumed that projects within the immediate study area could be considered but projects located at more distant locations would be assumed to be part of the background growth rate.

The **HFRP Garden Bar Road site** has been previously evaluated under CEQA and approved with conditions. This analysis assumes this portion of the HFRP expansion occurs as part of the Cumulative baseline condition.

Two other projects were identified.

Placer County Winery and Rural Breweries Ordinance. Placer County is currently preparing an Environmental Impact Report evaluating the impacts of amending the Winery & Rural Breweries Ordinance. In general, the proposed amendment is intended to provide additional flexibility with respect to holding events at existing and future wineries and farm breweries. From a standpoint of traffic and transportation, the amendments do not change the day-to-day operation of wineries and farm breweries nor does the amendment change the process undertaken by the County to process new winery and farm brewery applications. The amendment will change the number of agricultural promotion events permitted at wineries and farm breweries and will increase the number of special events that are allowed at existing and future facilities located on large parcel sizes.

The approach to estimating the traffic contribution accompanying the amendment identifies the immediate impacts of implementing the ordinance at existing facilities as well as the long-term cumulative effect of operating new, existing and pending wineries and farm breweries with the change in events permitted under the ordinance. Very conservative assumptions for the activity associated with additional events were identified based on data collected at existing wineries and farm breweries and permitted attendance. Additional events were assumed to occur at each existing winery and farm brewery because of the proposed amendments to the ordinance, and the resulting vehicle trips were assigned to the study area circulation system. The cumulative impacts of developing new wineries and farm breweries under the amended ordinance were also evaluated assuming that 30 new facilities would be developed over twenty years. Under the conservative assumptions made for the amendment EIR, a total of 3,728 daily trips and 1,044 peak hour trips were anticipated as a result on additional events at the 11 existing and 30 future wineries or rural breweries.

Sierra College Blvd / SR 193 Retail Center. Placer County has been in pre-development discussions regarding a possible retail center to be constructed at the intersection of Sierra College Blvd and SR 193. This 10-acre development would require a GPA/rezone and would be subject to an EIR before consideration by the Placer County Planning Commission and Board of Supervisors. However, for this analysis this project has been assumed to be completed to provide a very conservative assessment of cumulative impacts.

For this analysis, traffic associated with development in the City of Lincoln, projects south of SR 193, such as Bickford Ranch, the Village at Loomis and Loomis Costco, and development in North Auburn is reflected in the background growth rate.

Roadway Improvements. The nature of improvements to study area roads and intersections that is reasonably certain has been determined based on consideration of projects included in adopted funding mechanisms. Placer County administers the Countywide Traffic Mitigation Fee Program which requires new development to contribute to the cost of circulation system improvements of county wide benefit. Individual benefit districts have been established. Table 16 notes improvements that affect study area roads. These improvements are assumed to be in place under cumulative conditions. In addition, the improvements to Garden Bar Road that were

required to support full use of the site have been assumed to be constructed under the cumulative base condition.

TABLE 16 PLACER COUNTY CIP BENEFIT DISTRICT PROJECTS		
Street / Intersection	**Segment**	**Description of Improvements**
Auburn Bowman Benefit District		
Mt. Vernon Road	City of Auburn to Joeger Road	Improve Existing 2-lanes
Ophir Road	At Wise Road	Reconstruct pavement
SR 49	Dry Creek Road to Bell Road	Widen to 6-lanes
Newcastle / Horseshoe Bar / Penryn Benefit District		
Bald Hill Road	Mt. Vernon Rd to Lozanos Road	Widen / Reconstruct
Crater Hill Road	At Chili Hill Road	Realign intersection
Chili Hill Road	West of Lozanos Road	Realign Horizontal Curve
Lozanos Road	At Auburn Ravine	Replace Bridge
	Ophir Road to Wise Road	Shoulder widening
Sierra College Blvd	King Road to English Colony Way	Widen to 4-lanes
	At Delmar Avenue	Signalize
Wise Road	Ophir Road to Crater Hill Road	Shoulder widening
SR 193	Taylor Road to Gold Hill Road	Shoulder widening
Placer Central Benefit District		
Mt. Vernon Road	At Ayers Holmes Road	Improve sight distance
	At Mount Pleasant Road	Reconstruct intersection
Sierra College Blvd	English Colony Way to SR 193	Widen to 4-lanes
SR 193	Gold Hill Road to Sierra College Blvd	Shoulder widening
	Sierra College Blvd to City of Lincoln	Widen to 4-lanes

Traffic Volume Forecasts

Cumulative traffic volumes have been created by applying the uniform annual traffic growth rate of 2% for 20 years (i.e., overall factor of 1.49) and by superimposing the trips associated with reasonably foreseeable projects (i.e., Cumulative No Project conditions) as well as the proposed HFRP project.

Cumulative Traffic Conditions – No Project

Daily Traffic Volume Forecasts and Levels of Service. Tables 17 and 18 present daily traffic volume forecasts that compare conditions with and without the HFRP project. As indicated, if the HFRP project does not proceed and no new facilities are created, all study area roadways will carry traffic volumes that result in Levels of Service that remain within of Placer County's minimum LOS C or LOS D (i.e., ½ mile of state highway) standards.

Peak Hour Traffic Volume Forecasts. Figure 11 presents cumulative peak hour traffic volumes without the trips associated with implementing the HFRP Expansion project. These forecasts reflect the identified background growth rate as well as trips from reasonably foreseeable projects.

Cumulative No Project Intersection Level of Service. Table 19 identifies the long-term cumulative Level of Service projected at study intersections under the No Project condition. While most locations will satisfy the adopted minimum LOS standard, one intersection will operate with conditions that exceed the minimum LOS standard based on overall LOS.

The **SR 49 / Lone Star Road** intersection will operate at LOS F in both the weekday p.m. peak hour and the Saturday peak hour. If background traffic on Lone Star Road increases at the assumed rate, the westbound volume would satisfy peak hour warrants in the weekday p.m. peak hour and Saturday peak hour.

TABLE 17
CUMULATIVE SATURDAY DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE

Road	From	To	Class	Saturday				
				Cumulative		Cumulative Plus HFRP		
						Daily Volume		
				Daily Volume	LOS	HFRP Only	Total	LOS
Public Roads								
Mears Drive	Mt. Vernon Road	Park Entrance	Local - R	915	A	120	1,035	A
Mt. Vernon Road	Ayers Holmes Road	Buffalo Road	RC - R	2,160	B	216	2.376	B
Mt. Vernon Road	Mears Drive	Meyers Lane	RC - R	4,190	C	168	4,358	C
Garden Bar Road	Wise Road	Mt. Pleasant Rd	Local - R	1,284	A	0	1,284	A
Garden Bar Road	Mt. Pleasant Road	Big Hill Road	Local - R	802	A	0	802	A
Bell Road	Lone Star Road	Cramer Road	EC - R	986	A	34	1,020	A
Bell Road	Crammer Road	Joeger Road	RC - R	2,254	B	402	2,656	B
Lone Star Road	Bell Road	SR 49	Local - R	1,944	B	630	2,574	B
Cramer Road	Bell Road	SR 49	Local - R	1,158	B	407	1,565	B
Private Roads								
Auburn Valley Road	Bell Road	View Ridge Drive	Local - R	1,290	A	664	1,954	B
Auburn Valley Road	Fairway Court	Curtola Ranch Rd	Local - R	585	A	664	1,249	A

BOLD values exceed minimum LOS C or LOS D standard.
HIGHLIGHTED values are a significant impact

TABLE 18
CUMULATIVE WEEKDAY DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE

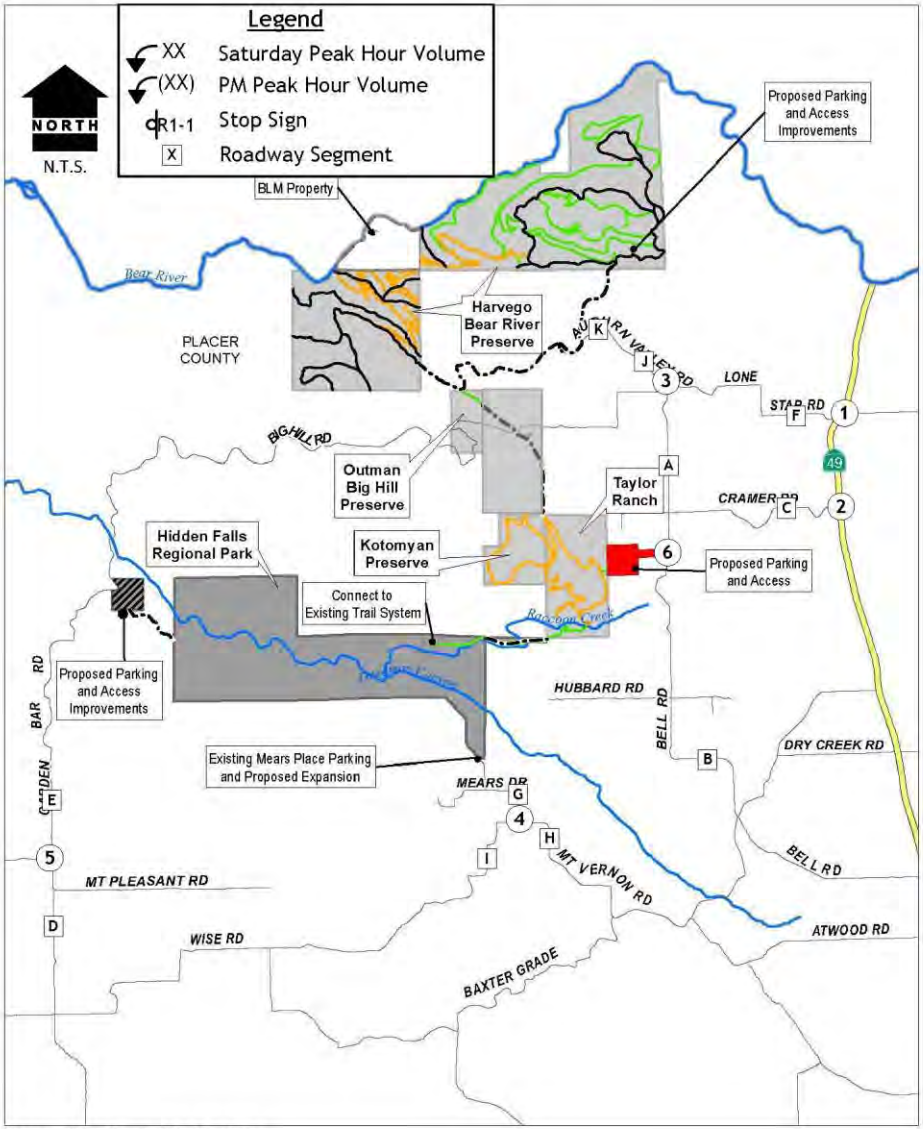
Road	From	To	Class	Weekday				
				Cumulative		Cumulative Plus HFRP		
						Daily Volume		
				Daily Volume	Level of Service	HFRP Project Only	Total	Level of Service
Public Roads								
Mears Drive	Mt. Vernon Road	Park Entrance	Local – R	979	A	56	1,035	A
Mt. Vernon Road	Ayers Holmes Rd	Buffalo Road	RC – R	2,734	B	96	2.830	B
Mt. Vernon Road	Mears Drive	Meyers Lane	RC – R	4,278	B	80	4,358	C
Garden Bar Road	Wise Road	Mt. Pleasant Rd	Local - R	1,237	A	0	1,237	A
Garden Bar Road	Mt. Pleasant Road	Big Hill Road	Local – R	628	A	0	628	A
Bell Road	Lone Star Road	Cramer Road	EC – R	1,091	A	14	1,105	A
Bell Road	Crammer Road	Joeger Road	RC – R	2,272	A	170	2,442	B
Lone Star Road	Bell Road	SR 49	Local – R	2,294	B	280	2,574	B
Cramer Road	Bell Road	SR 49	Local R	1,388	A	217	1,638	B
Private Roads								
Auburn Valley Road	Bell Road	View Ridge Drive	Local - R	1,393		294	1,687	B
Auburn Valley Road	Fairway Court	Curtola Ranch Rd	Local - R	440	A	294	734	A

BOLD values exceed minimum LOS C or LOS D standard.
HIGHLIGHTED values are a significant impact

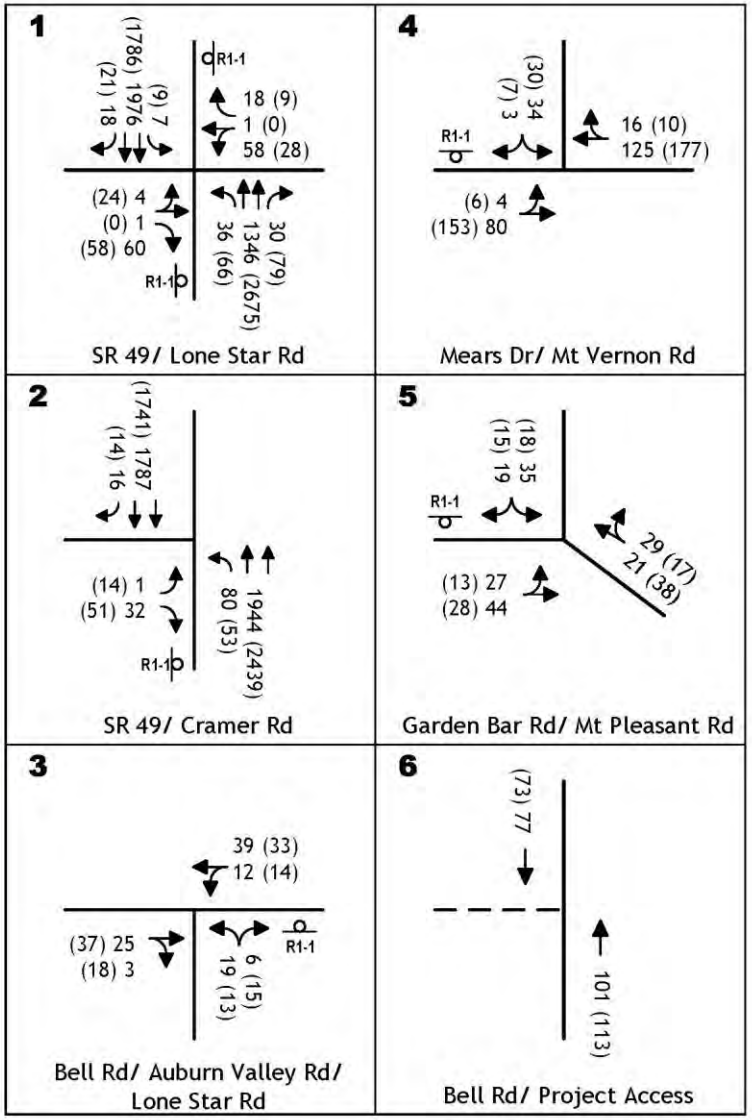
TABLE 19
CUMULATIVE PLUS PROJECT INTERSECTION LEVELS OF SERVICE

#	Location	Control	Weekday PM Peak Hour				Saturday Peak Hour			
			Cum Base		Cum Plus Project		Cumulative		Cum Plus Project	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	SR 49 / Lone Star Road	EB/WB Stop								
	(overall)		**(192.0)**	**(F)**	**(197.2)**	**(F)**	**(174.8)**	**(F)**	**(229.3)**	**(F)**
	Eastbound approach		>300	F	>300	F	>300	F	>300	F
	Westbound approach		>300	F	>300	F	>300	F	>300	F
	Northbound left turn		18.9	C	19.3	C	22.1	C	24.2	C
	Southbound left turn		33.6	D	33.8	D	13.1	B	13.2	B
2	SR 49 / Cramer Road	EB Stop								
	(overall)		(30.9)	(D)	**(36.6)**	**(E)**	(21.5)	(C)	(30.3)	(C)
	Eastbound approach		42.0	E	50.0	E	23.0	C	37.3	E
	Northbound left turn		17.3	C	17.7	C	20.9	C	22.9	C
3	Bell Rd / Auburn Valley Rd / Lone Star Rd	EB Stop								
	(overall)		(8.7)	(A)	(8.8)	(A)	(8.5)	(A)	(9.2)	(A)
	Eastbound approach		9.0	A	9.1	A	9.2	A	9.7	A
	Northbound left turn		7.3	A	7.3	A	7.4	A	7.5	A
4	Mt. Vernon Road / Mears Drive	SB Stop								
	(overall)		(10.7)	(B)	(10.7)	(B)	(10.0)	(B)	(10.1)	(B)
	Southbound approach		11.2	B	11.2	B	10.3	B	10.5	B
	Eastbound left turn		7.7	A	7.7	A	7.6	A	7.6	A
5	Mt. Pleasant Road / Garden Bar Rd	SB Stop								
	(overall)		(8.5)	(A)	(8.5)	(A)	(8.9)	(A)	(8.9)	(A)
	Southbound approach		9.0	A	9.0	A	9.7	A	9.7	A
	Eastbound left turn		7.4	A	7.4	A	7.4	A	7.4	A
6	Bell Road / Twilight Access	EB Stop								
	(overall)		-	-	(9.1)	(A)	-	-	(9.2)	(A)
	Eastbound approach				8.9	A			9.6	A
	Northbound left turn				7.4	A			7.4	A

(XX) is overall weighted average delay and LOS for those movements yielding right of way
BOLD values exceed minimum overall LOS C or D Standard. **HIGHLIGHTED** values are a significant impact



Source: Placer County 2017, PLT 2017



CUMULATIVE BASE TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

0090-09 RA 8/1/2019

figure 11

Cumulative Traffic Conditions – Plus Project

Cumulative Plus Project Roadway Segment Level of Service. Tables 17 and 18 also present the daily traffic volumes anticipated on study area roads in the future if the HFRP project is completed and other growth also occurs. As indicated all roadways will carry traffic volumes that are indicative of Levels of Service that remain within Placer County's minimum LOS C/D standard. Thus, the impacts of the HFRP Expansion are not significant in these areas.

Cumulative Plus Project Intersection Traffic Volumes. Figure 12 presents the Weekday and Saturday peak hour traffic volumes occurring with implementation of the ordinance and other growth.

Cumulative Plus Project Intersection Level of Service. Table 19 compares the long-term cumulative Level of Service projected at study intersections under the No Project and Plus Project conditions. While many locations will continue to satisfy the adopted minimum LOS standard, one intersection will operate with conditions that exceed minimum standard for overall LOS if the HFRP Expansion proceeds.

The **SR 49 / Lone Star Road intersection will** operate at LOS F in the weekday p.m. and Saturday peak hour. Because conditions exceed LOS D with and without the project, the significance of the project's impact at intersections controlled by side street stop signs is based on the incremental change in delay and is also predicated on satisfaction of peak hour traffic signal warrants. In this case, because the incremental change in overall delay (5.2 seconds in p.m. and 54.5 seconds on Saturday) exceeds the incremental allowed under Placer County methodology (i.e., 2.5 seconds) and projected traffic volumes do satisfy peak hour warrants at this time, the project's impact is ***significant*** at this intersection.

Measures to reduce this impact to a less than significant level are subject to Caltrans approval on this state highway, and as noted earlier a regional approach incorporating roundabouts at selected intersection may be pursued by Caltrans and the County. Alternatively, a traffic signal at this location would result in LOS D conditions, which would satisfy Placer County's minimum LOS standards.

Any measure that involves stopping traffic on mainline state highways is subject to an additional level of analysis before a decision can be made as to the applicable choice of traffic control. Current Caltrans policy requires than an ***Intersection Control Evaluation (ICE)*** report be prepared to evaluate the best choice among all-way stop, traffic signal, or roundabout.

As noted earlier no funding source has been identified for improvements to the SR 49 corridor north of Dry Creek Road. Placer County could elect to identify a strategy for the overall traffic controls in the area and update its fee program to address the local share of these costs. However, while HFRP could contribute its fair share to the cost of SR 49 corridor improvements by paying adopted fees, Placer County cannot guarantee that funding will be available. As a result, this impact is ***significant and unavoidable.***

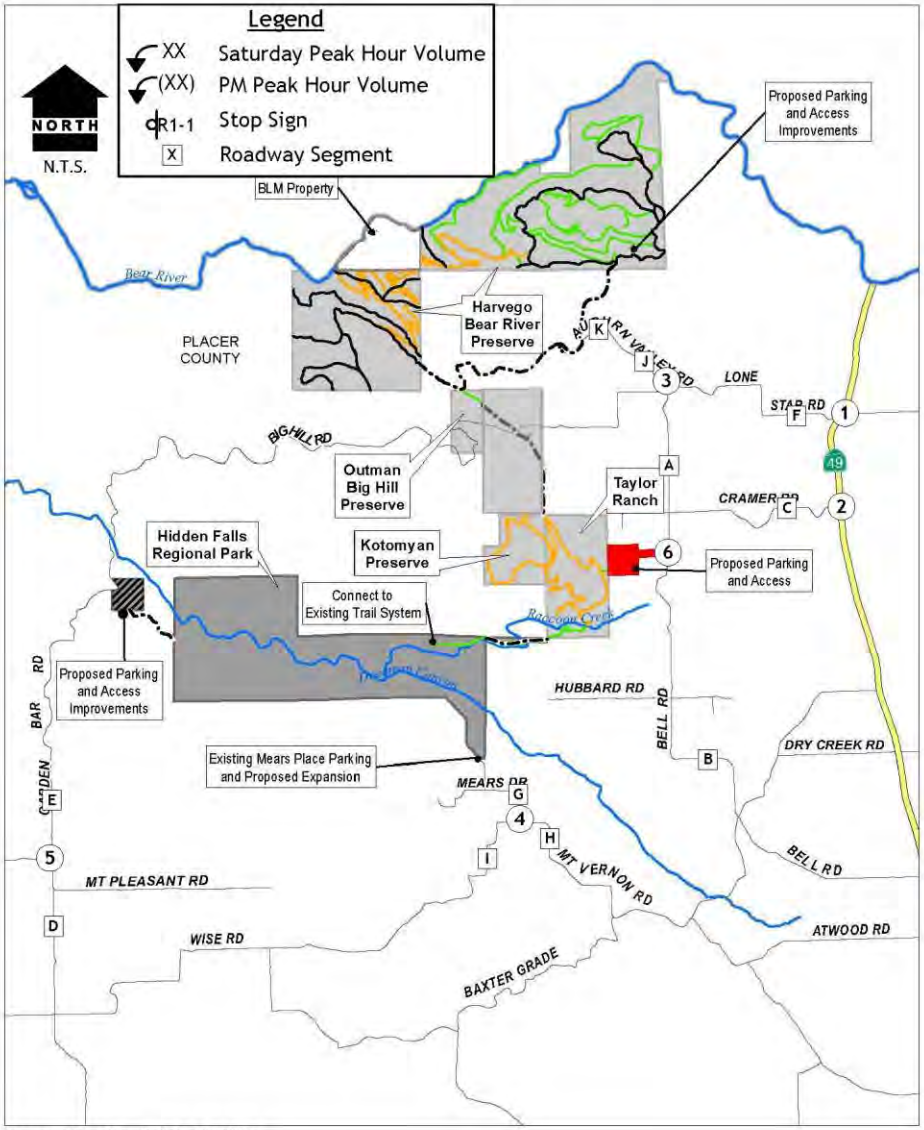
The **SR 49 / Cramer Road intersection** will operate at LOS E in the weekday peak hour. Because LOS E conditions exceed LOS D standard and peak hour traffic signal warrants are satisfied, the project's cumulative impact is ***significant*** at this intersection.

Measures to reduce this impact to a less than significant level are subject to Caltrans approval on this state highway, and as noted earlier a regional approach incorporating roundabouts at selected intersection may be pursued by Caltrans and the County. However, it may be that the SR 49 / Cramer Road intersection might better be limited to right-turns-only in concert with u-turn opportunities available at other nearby roundabouts. Alternatively, a traffic signal at this location would result in LOS D conditions, which would satisfy Placer County's minimum LOS standards.

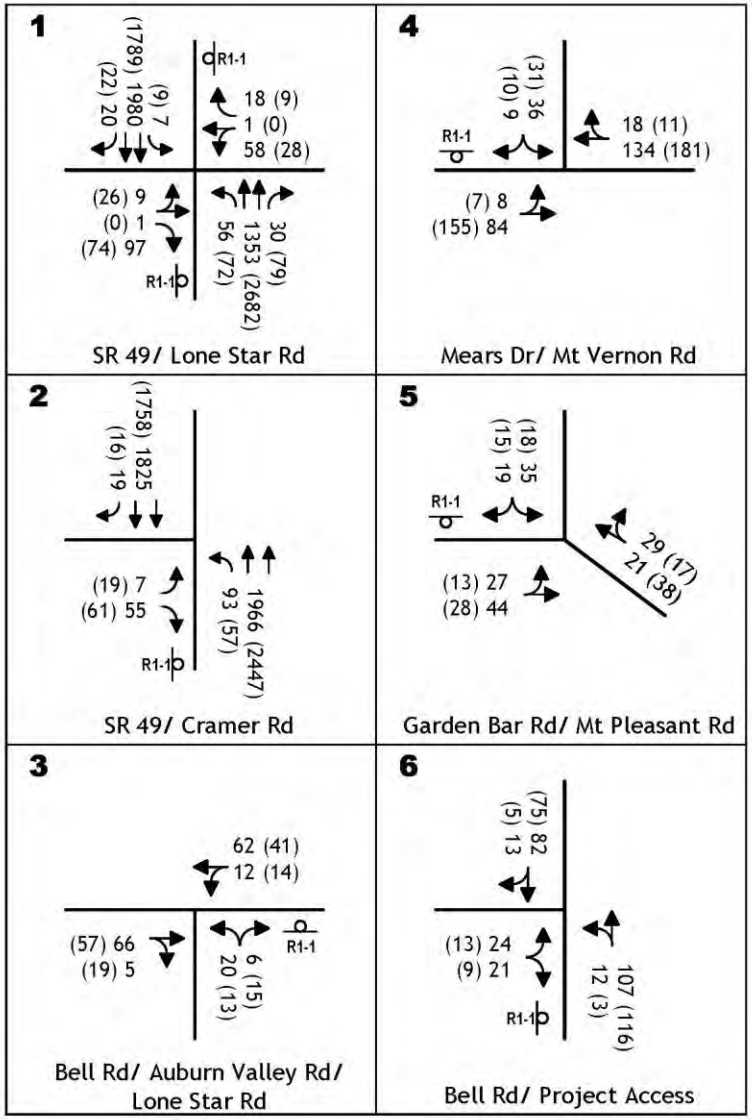
Any measure that involves stopping traffic on mainline state highways is subject to an additional level of analysis before a decision can be made as to the applicable choice of traffic control. Current Caltrans policy requires than an ***Intersection Control Evaluation (ICE)*** report be prepared to evaluate the best choice among all-way stop, traffic signal, or roundabout.

As noted earlier no funding source has been identified for improvements to the SR 49 corridor north of Dry Creek Road. Placer County could elect to identify a strategy for the overall traffic controls in the area and update its fee program to address the local share of these costs. However, while HFRP could contribute its fair share to the cost of SR 49 corridor improvements by paying adopted fees, Placer County cannot guarantee that funding will be available. As a result, this impact is ***significant and unavoidable.***

Cumulative Plus Project Traffic Signal Warrants. The status of peak hour traffic signal warrants with implementation of the ordinance was determined. Beyond the two locations on SR 49, no additional intersections carry volumes that satisfy rural traffic signal warrants.



Source: Placer County 2017, PLT 2017



CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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Transportation Engineers

0090-09 RA 8/1/2019

figure 12

Summary of Cumulative Plus Project Impacts / Mitigations

The Hidden Fall Regional Park Expansion project contributes to significant cumulative off-site traffic impacts at two locations:

Under Cumulative conditions the **SR 49 / Lone Star Road intersection** will operate at LOS F in the weekday p.m. and Saturday peak hour. Because conditions exceed LOS D with and without the project, the significance of the project's impact at intersections controlled by side street stop signs is based on the incremental change in delay and is also predicated on satisfaction of peak hour traffic signal warrants. In this case, because the incremental change in overall delay exceeds the increment allowed under Placer County methodology and projected traffic volumes do satisfy peak hour warrants, the project's impact is ***significant*** at this intersection.

Measures to reduce this impact to a less than significant level are subject to Caltrans approval on this state highway, and as noted earlier a regional approach incorporating roundabouts at selected intersection may be pursued by Caltrans and the County. Alternatively, a traffic signal at this location would result in LOS D conditions, which would satisfy Placer County's minimum LOS standards.

Any measure that involves stopping traffic on mainline state highways is subject to an additional level of analysis before a decision can be made as to the applicable choice of traffic control. Current Caltrans policy requires than an ***Intersection Control Evaluation (ICE)*** report be prepared to evaluate the best choice among all-way stop, traffic signal, or roundabout.

As noted earlier no funding source has been identified for improvements to the SR 49 corridor north of Dry Creek Road. Placer County could elect to identify a strategy for the overall traffic controls in the area and update its fee program to address the local share of these costs. However, while HFRP could contribute its fair share to the cost of SR 49 corridor improvements by paying adopted fees, Placer County cannot guarantee that funding will be available. As a result, this impact is ***significant and unavoidable.***

Under cumulative conditions the **SR 49 / Cramer Road intersection** will operate at LOS E in the weekday p.m. peak hour. Because conditions exceed LOS D with the project its impact and peak hour traffic signal warrants are satisfied, the project's impact is ***significant*** at this intersection.

Measures to reduce this impact to a less than significant level are subject to Caltrans approval on this state highway, and a regional approach incorporating roundabouts at selected intersection has been discussed by Caltrans and Placer County and may be pursued. A two-lane roundabout would yield LOS meeting the minimum standards. However, it may be that the SR 49 / Cramer Road intersection might better be limited to right-turns-only in concept with u-turn opportunities available at other nearby roundabouts. Alternatively, a traffic signal at this location would result in LOS D conditions, which satisfy Placer County's minimum LOS standards.

Any measure that involved stopping traffic on mainline state highways is subject to an additional level of analysis before a decision can be made as to the applicable choice of traffic control. Current Caltrans policy requires than an ***Intersection Control Evaluation (ICE)*** report be prepared to evaluate the best choice among all-way stop, traffic signal, roundabout.

No funding source has been identified for improvements to the SR 49 corridor north of Dry Creek Road. Placer County could elect to identify a strategy for the overall traffic controls in the area and update its fee program to address the local share of these costs. However, while HFRP could contribute its fair share to the cost of SR 49 corridor improvements by paying adopted fees, Placer County cannot guarantee that funding will be available. As a result, this impact is ***significant and unavoidable.***

APPENDIX
(under separate cover)

Traffic Counts

Level of Service Calculation Worksheets

TECHNICAL APPENDIX

FOR

HIDDEN FALLS REGIONAL PARK EXPANSION
TRAFFIC IMPACT ANALYSIS

Placer County, California

Prepared For:

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2022 J Street
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August 1, 2019

Job No. 0090-09

SR 49 & Lone Star Rd

Date: 10/8/2016

Day: Saturday

Project #: 16-7716-001

Peak Hour Summary

Southbound Approach

AM	10	1296	5	0	914 AM
NOON	0	0	0	0	0 NOON
PM	0	0	0	0	0 PM

SR 49

AM Peak Hour	10:00 - 11:00
NOON Peak Hour	
PM Peak Hour	

Lone Star Rd

	AM	NOON	PM
	33	0	0
	0	0	0
	3	0	0
	1	0	0
	40	0	0

Eastbound Approach

CONTROL

Westbound Approach

	AM	NOON	PM
	12	0	0
	1	0	0
	39	0	0
	0	0	0
	26	0	0

Count Periods	Start	End
AM	9:00 AM	11:00 AM
NOON	NONE	NONE
PM	NONE	NONE

AM	1377	2	22	899	20 AM
NOON	0	0	0	0	0 NOON
PM	0	0	0	0	0 PM

Northbound Approach

Total Ins & Outs

North Leg		
1311	914	AM
0	0	NOON
0	0	PM

West Leg			East Leg		
AM	NOON	PM			
33	0	0	52	0	0
44	0	0	26	0	0
			AM	NOON	PM

South Leg		
1377	943	AM
0	0	NOON
0	0	PM

Total Volume Per Leg

North Leg	
2225	AM
0	NOON
0	PM

West Leg			East Leg		
AM	NOON	PM			
77	0	0	78	0	0
			AM	NOON	PM

South Leg	
2320	AM
0	NOON
0	PM

ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

0090-09

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

File Name : 16-7716-001 SR 49 & Lone Star Rd
Date : 10/8/2016

Unshifted Count = All Vehicles & Uturns

	SR 49 Southbound					Lone Star Rd Westbound					SR 49 Northbound					Lone Star 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
9:00	1	236	2	0	239	6	0	3	0	9	6	139	4	0	149	3	0	12	0	15	412	0
9:15	5	233	1	0	239	5	2	2	0	9	3	149	1	0	153	1	1	8	0	10	411	0
9:30	1	247	1	0	249	14	0	2	0	16	4	188	7	0	199	0	0	6	0	6	470	0
9:45	1	307	0	0	308	11	0	0	0	11	7	195	4	0	206	3	0	6	0	9	534	0
Total	8	1023	4	0	1035	36	2	7	0	45	20	671	16	0	707	7	1	32	0	40	1827	0
10:00	3	293	1	0	297	9	0	2	0	11	3	225	2	1	231	0	0	11	0	11	550	1
10:15	0	343	4	0	347	8	0	6	0	14	5	196	7	0	208	2	1	9	0	12	581	0
10:30	2	304	1	0	307	13	1	3	0	17	5	239	7	0	251	0	0	11	0	11	586	0
10:45	0	356	4	0	360	9	0	1	0	10	9	239	4	1	253	1	0	9	0	10	633	1
Total	5	1296	10	0	1311	39	1	12	0	52	22	899	20	2	943	3	1	40	0	44	2350	2
Grand Total	13	2319	14	0	2346	75	3	19	0	97	42	1570	36	2	1650	10	2	72	0	84	4177	2
Apprch %	0.6%	98.8%	0.6%	0.0%		77.3%	3.1%	19.6%	0.0%		2.5%	95.2%	2.2%	0.1%		11.9%	2.4%	85.7%	0.0%			
Total %	0.3%	55.5%	0.3%	0.0%	56.2%	1.8%	0.1%	0.5%	0.0%	2.3%	1.0%	37.6%	0.9%	0.0%	39.5%	0.2%	0.0%	1.7%	0.0%	2.0%	100.0%	

AM PEAK HOUR	SR 49 Southbound					Lone Star Rd Westbound					SR 49 Northbound					Lone Star 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 10:00 to 11:00																					
Peak Hour For Entire Intersection Begins at 10:00																					
10:00	3	293	1	0	297	9	0	2	0	11	3	225	2	1	231	0	0	11	0	11	550
10:15	0	343	4	0	347	8	0	6	0	14	5	196	7	0	208	2	1	9	0	12	581
10:30	2	304	1	0	307	13	1	3	0	17	5	239	7	0	251	0	0	11	0	11	586
10:45	0	356	4	0	360	9	0	1	0	10	9	239	4	1	253	1	0	9	0	10	633
Total Volume	5	1296	10	0	1311	39	1	12	0	52	22	899	20	2	943	3	1	40	0	44	2350
% App Total	0.4%	98.9%	0.8%	0.0%		75.0%	1.9%	23.1%	0.0%		2.3%	95.3%	2.1%	0.2%		6.8%	2.3%	90.9%	0.0%		
PHF	.417	.910	.625	.000	.910	.750	.250	.500	.000	.765	.611	.940	.714	.500	.932	.375	.250	.909	.000	.917	.928

Prepared by National Data & Surveying Services

SR 49 & Lone Star Rd

Peak Hour Turning Movement Count

ID: 18-07413-001
City: Auburn

Day: Friday
Date: 12/07/2018

PEAK HOURS

AM	NONE
NOON	NONE
PM	04:15 PM - 05:15 PM

COUNT PERIODS

AM	NONE
NOON	NONE
PM	04:00 PM - 06:00 PM

SR 49 — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	13	1182	6	0	1799	PM

EASTBOUND — Lone Star Rd

AM	NOON	PM	
0	0	57	⇦
0	0	0	↶ 0
0	0	15	↱ 0
0	0	0	→ 0
0	0	39	↴ 0
AM	NOON	PM	

WESTBOUND — Lone Star Rd

PM	NOON	AM	
6	0	0	0 ↱
0	0	0	0 ←
19	0	0	0 ↰
0	0	0	0 ↶
59	0	0	⇨
PM	NOON	AM	

CONTROL

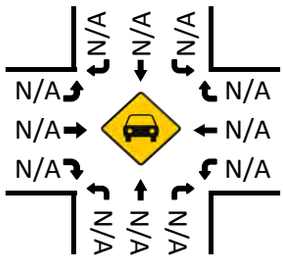
0

	AM	NOON	PM
TEV	0	0	3155
PHF			0.98

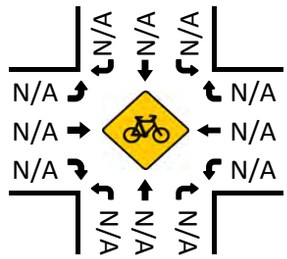
NORTHBOUND — SR 49

PM	1240	0	44	1778	53	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

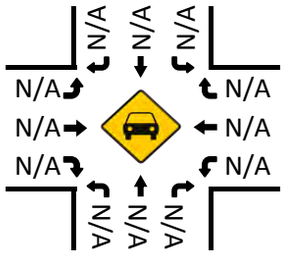
Total Vehicles (AM)



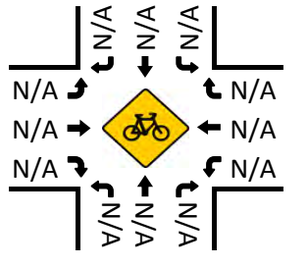
Bikes (AM)



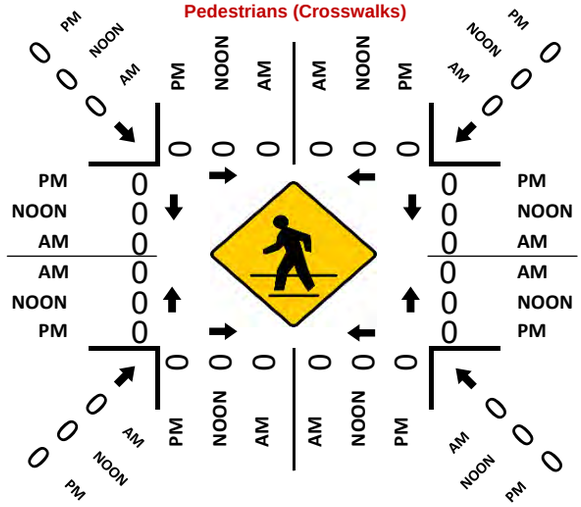
Total Vehicles (Noon)



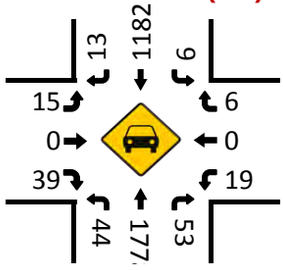
Bikes (NOON)



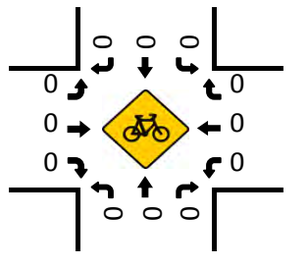
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: SR 49 & Lone Star Rd
City: Auburn
Control:

Project ID: 18-07413-001
Date: 2018-12-07

Total

NS/EW Streets:	SR 49				SR 49				Lone Star Rd				Lone Star Rd				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	12	392	14	0	3	309	2	0	4	0	12	0	10	0	5	0	763
4:15 PM	12	454	12	0	2	298	3	0	6	0	11	0	8	0	2	0	808
4:30 PM	14	444	14	0	1	290	3	0	3	0	14	0	3	0	2	0	788
4:45 PM	9	427	10	0	1	293	4	0	4	0	5	0	3	0	1	0	757
5:00 PM	9	453	17	0	2	301	3	0	2	0	9	0	5	0	1	0	802
5:15 PM	14	407	4	0	3	291	1	0	1	0	10	0	3	0	2	0	736
5:30 PM	8	249	4	0	4	292	4	0	0	0	6	0	7	0	4	0	578
5:45 PM	4	287	6	0	0	285	5	0	1	0	4	0	6	0	3	0	601
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	82	3113	81	0	16	2359	25	0	21	0	71	0	45	0	20	0	5833
APPROACH %'s :	2.50%	95.02%	2.47%	0.00%	0.67%	98.29%	1.04%	0.00%	22.83%	0.00%	77.17%	0.00%	69.23%	0.00%	30.77%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	44	1778	53	0	6	1182	13	0	15	0	39	0	19	0	6	0	3155
PEAK HR FACTOR :	0.786	0.979	0.779	0.000	0.750	0.982	0.813	0.000	0.625	0.000	0.696	0.000	0.594	0.000	0.750	0.000	0.976
		0.979				0.981				0.794				0.625			

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 49 & Lone Star Rd
City: Auburn
Control: 0

Project ID: 18-07413-001
Date: 2018-12-07

Bikes

NS/EW Streets:	SR 49				SR 49				Lone Star Rd				Lone Star Rd				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

National Data & Surveying Services Intersection Turning Movement Count

Location: SR 49 & Lone Star Rd
City: Auburn

Project ID: 18-07413-001
Date: 2018-12-07

Pedestrians (Crosswalks)

NS/EW Streets:	SR 49		SR 49		Lone Star Rd		Lone Star Rd		
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	2	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	2	0	0	0	0	0	2
APPROACH %'s :			100.00%	0.00%					
PEAK HR :	04:15 PM - 05:15 PM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & Cramer Rd
City: Auburn
Control:

Project ID: 17-07774-002
Date: 2017-10-07

Total

NS/EW Streets:	SR 49				SR 49				Cramer Rd				Cramer Rd				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	1	258	0	0	0	303	0	0	1	0	5	0	0	0	0	0	568
12:15 PM	3	298	0	0	0	308	1	0	1	0	2	0	0	0	0	0	613
12:30 PM	2	289	0	0	0	314	0	0	0	0	6	0	0	0	0	0	611
12:45 PM	9	327	0	0	0	292	2	0	0	0	1	0	0	0	0	0	631
1:00 PM	2	347	0	0	0	302	2	0	0	0	10	0	0	0	0	0	663
1:15 PM	6	303	0	1	0	303	3	0	1	0	3	0	0	0	0	0	620
1:30 PM	7	324	0	0	0	274	2	0	0	0	5	0	0	0	0	0	612
1:45 PM	2	291	0	0	0	295	1	0	1	0	5	0	0	0	0	0	595
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	32	2437	0	1	0	2391	11	0	4	0	37	0	0	0	0	0	4913
APPROACH %'s :	1.30%	98.66%	0.00%	0.04%	0.00%	99.54%	0.46%	0.00%	9.76%	0.00%	90.24%	0.00%					
PEAK HR :	12:45 PM - 01:45 PM																TOTAL
PEAK HR VOL :	24	1301	0	1	0	1171	9	0	1	0	19	0	0	0	0	0	2526
PEAK HR FACTOR :	0.667	0.937	0.000	0.250	0.000	0.966	0.750	0.000	0.250	0.000	0.475	0.000	0.000	0.000	0.000	0.000	0.952
		0.950				0.964				0.500							

Prepared by National Data & Surveying Services

SR 49 & Cramer Rd

Peak Hour Turning Movement Count

ID: 17-07774-002
City: Auburn

Day: Saturday
Date: 10/07/2017

PEAK HOURS

AM	NOON	PM
NONE	12:45 PM - 01:45 PM	NONE

COUNT PERIODS

AM	NOON	PM
NONE	12:00 PM - 02:00 PM	NONE

SR 49 — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	9	1171	0	0	1302	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Cramer Rd)

AM	NOON	PM
0	33	0
0	0	0
0	1	0
0	0	0
0	19	0

WESTBOUND (Cramer Rd)

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

CONTROL

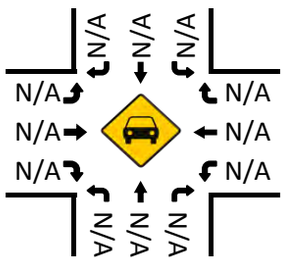
0

	AM	NOON	PM
TEV	0	2526	0
PHF		0.95	

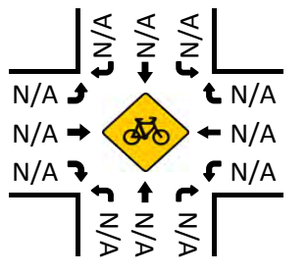
SR 49 — NORTHBOUND

PM	0	0	0	0	0	PM
NOON	1191	1	24	1301	0	NOON
AM	0	0	0	0	0	AM

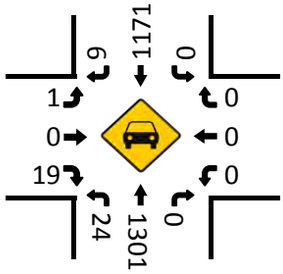
Total Vehicles (AM)



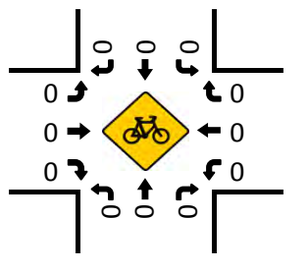
Bikes (AM)



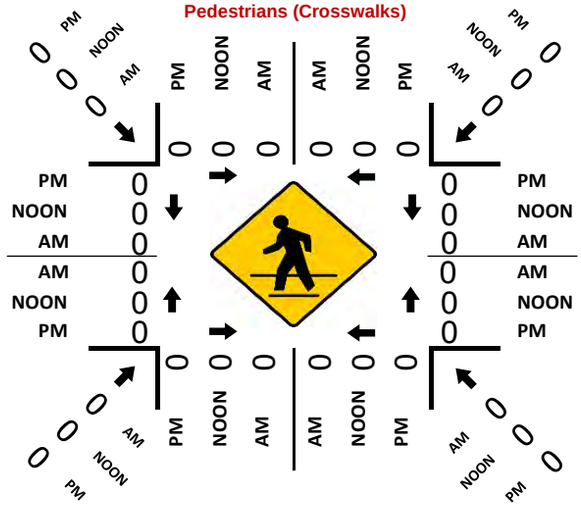
Total Vehicles (Noon)



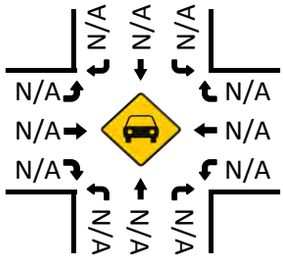
Bikes (NOON)



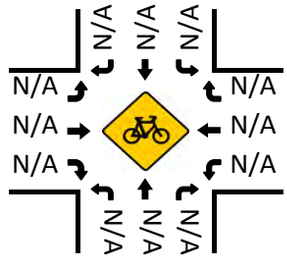
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: SR 49 & Cramer Rd
City: Auburn
Control:

Project ID: 17-07774-002
Date: 2017-10-05

Total

NS/EW Streets:	SR 49				SR 49				Cramer Rd				Cramer Rd				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	3	398	0	0	0	304	1	0	2	0	4	0	0	0	0	0	712
4:15 PM	7	392	0	0	0	292	3	0	1	0	7	0	0	0	0	0	702
4:30 PM	5	413	0	0	0	271	2	0	2	0	5	0	1	0	0	0	699
4:45 PM	5	418	0	0	0	286	2	0	3	0	3	0	0	0	0	0	717
5:00 PM	10	386	0	0	1	267	3	0	0	0	2	0	0	0	0	0	669
5:15 PM	7	418	0	0	0	274	1	0	0	0	7	0	0	0	0	0	707
5:30 PM	6	358	0	0	0	273	2	0	1	0	5	0	0	0	0	0	645
5:45 PM	8	340	0	0	0	241	0	0	0	0	1	0	0	0	0	0	590
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	51	3123	0	0	1	2208	14	0	9	0	34	0	1	0	0	0	5441
APPROACH %'s :	1.61%	98.39%	0.00%	0.00%	0.04%	99.33%	0.63%	0.00%	20.93%	0.00%	79.07%	0.00%	100.00%	0.00%	0.00%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	20	1621	0	0	0	1153	8	0	8	0	19	0	1	0	0	0	2830
PEAK HR FACTOR :	0.714	0.969	0.000	0.000	0.000	0.948	0.667	0.000	0.667	0.000	0.679	0.000	0.250	0.000	0.000	0.000	0.987
		0.970				0.952				0.844				0.250			

Prepared by National Data & Surveying Services

SR 49 & Cramer Rd

Peak Hour Turning Movement Count

ID: 17-07774-002
City: Auburn

Day: Thursday
Date: 10/05/2017

PEAK HOURS

AM: NONE
NOON: NONE
PM: 04:00 PM - 05:00 PM

COUNT PERIODS

AM: NONE
NOON: NONE
PM: 04:00 PM - 06:00 PM

SR 49 — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	8	1153	0	0	1629	PM

Cramer Rd — EASTBOUND

AM	NOON	PM	
0	0	28	
0	0	0	0
0	0	8	0
0	0	0	0
0	0	19	0
AM	NOON	PM	

WESTBOUND — Cramer Rd

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

CONTROL

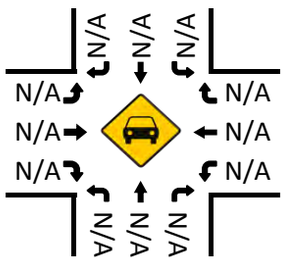
0

	AM	NOON	PM
TEV	0	0	2830
PHF			0.99

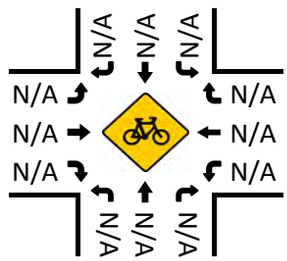
NORTHBOUND — SR 49

PM	1173	0	20	1621	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

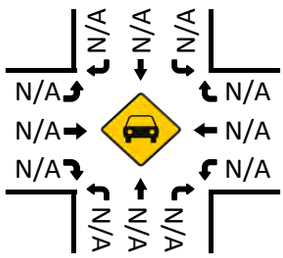
Total Vehicles (AM)



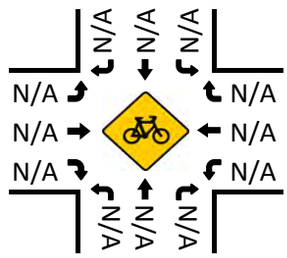
Bikes (AM)



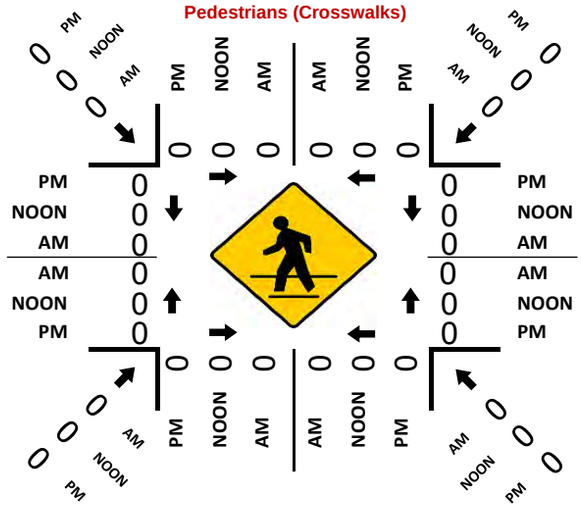
Total Vehicles (Noon)



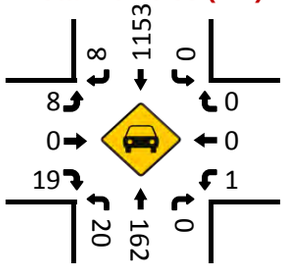
Bikes (NOON)



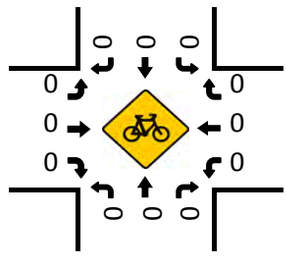
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)

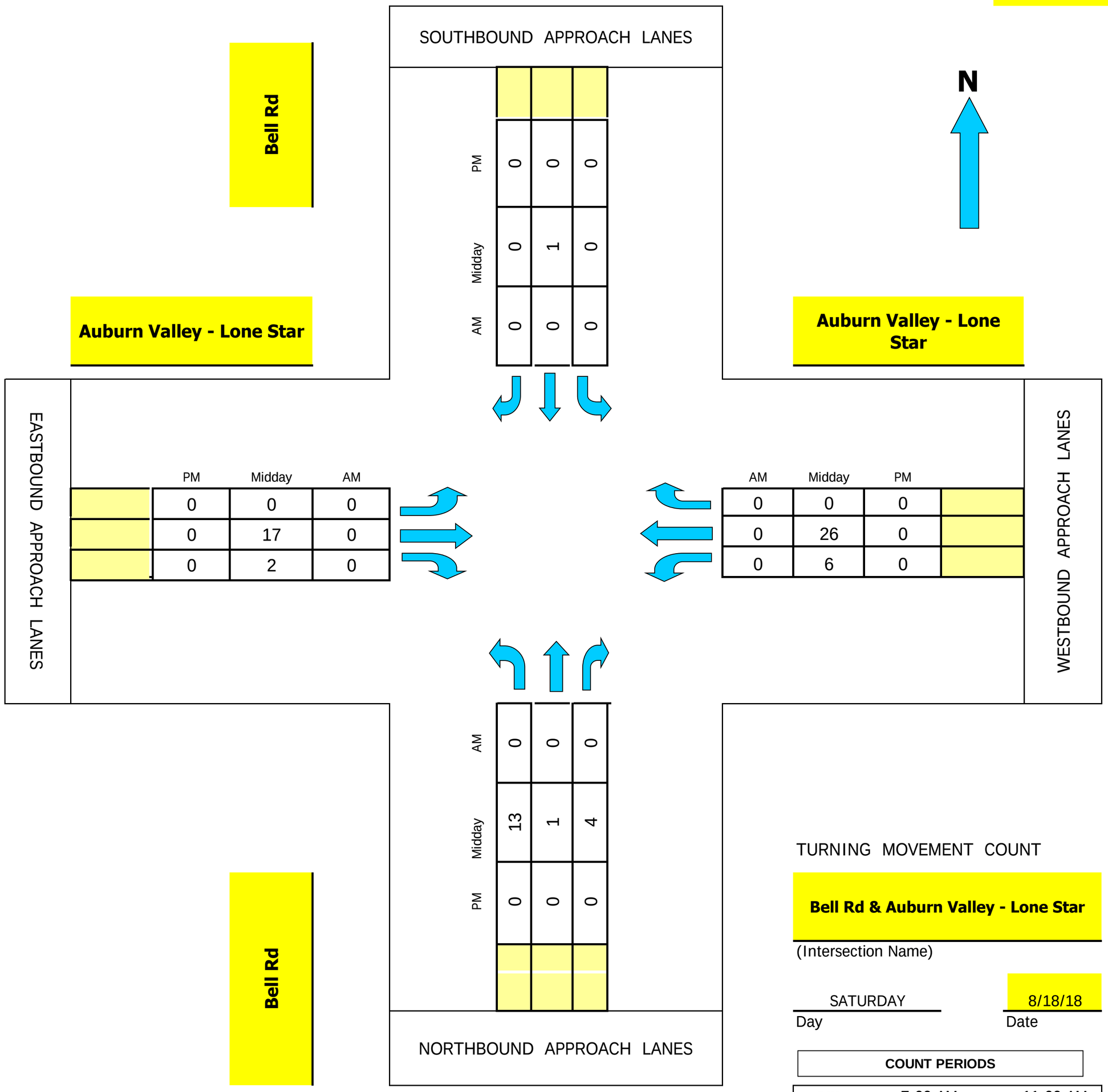


Intersection Turning Movement

Prepared by:
KD Anderson Associates, Inc.

TMC Summary of Bell Rd/Auburn Valley - Lone Star

Project #: 0090-09



TURNING MOVEMENT COUNT

Bell Rd & Auburn Valley - Lone Star

(Intersection Name)

SATURDAY — Day

8/18/18 — Date

COUNT PERIODS			
am	7:00 AM	-	11:00 AM
noon	11:00 AM	-	2:00 PM
pm	4:00 PM	-	6:00 PM

AM PEAK HOUR — 0 AM

NOON PEAK HOUR — 100 PM

PM PEAK HOUR — 0 AM

Intersection Turning Movement

Prepared by:

N-S STREET: Bell Rd DATE: 8/18/18 LOCATION: Placer County

E-W STREET: Auburn Valley - Lone Star DAY: SATURDAY PROJECT# 0090-09

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
12:00 PM	1	1	5		0			4	1	3	8		23
12:15 PM	1	0	6		0			2	1	1	0		11
12:30 PM	1	0	1		0			5	1	1	2		11
12:45 PM	2	0	0		0			3	3	1	5		14
1:00 PM	3	0	2		1			6	0	1	5		18
1:15 PM	2	0	0		0			5	1	3	2		13
1:30 PM	2	0	1		0			1	1	0	10		15
1:45 PM	6	1	1		0			5	0	2	9		24
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	18	2	16	0	1	0	0	31	8	12	41	0	129

NOON Peak Hr Begins at: 100 PM

PEAK VOLUMES =	13	1	4	0	1	0	0	17	2	6	26	0	70
PEAK HR. FACTOR:		0.563			0.250			0.792			0.727		0.729

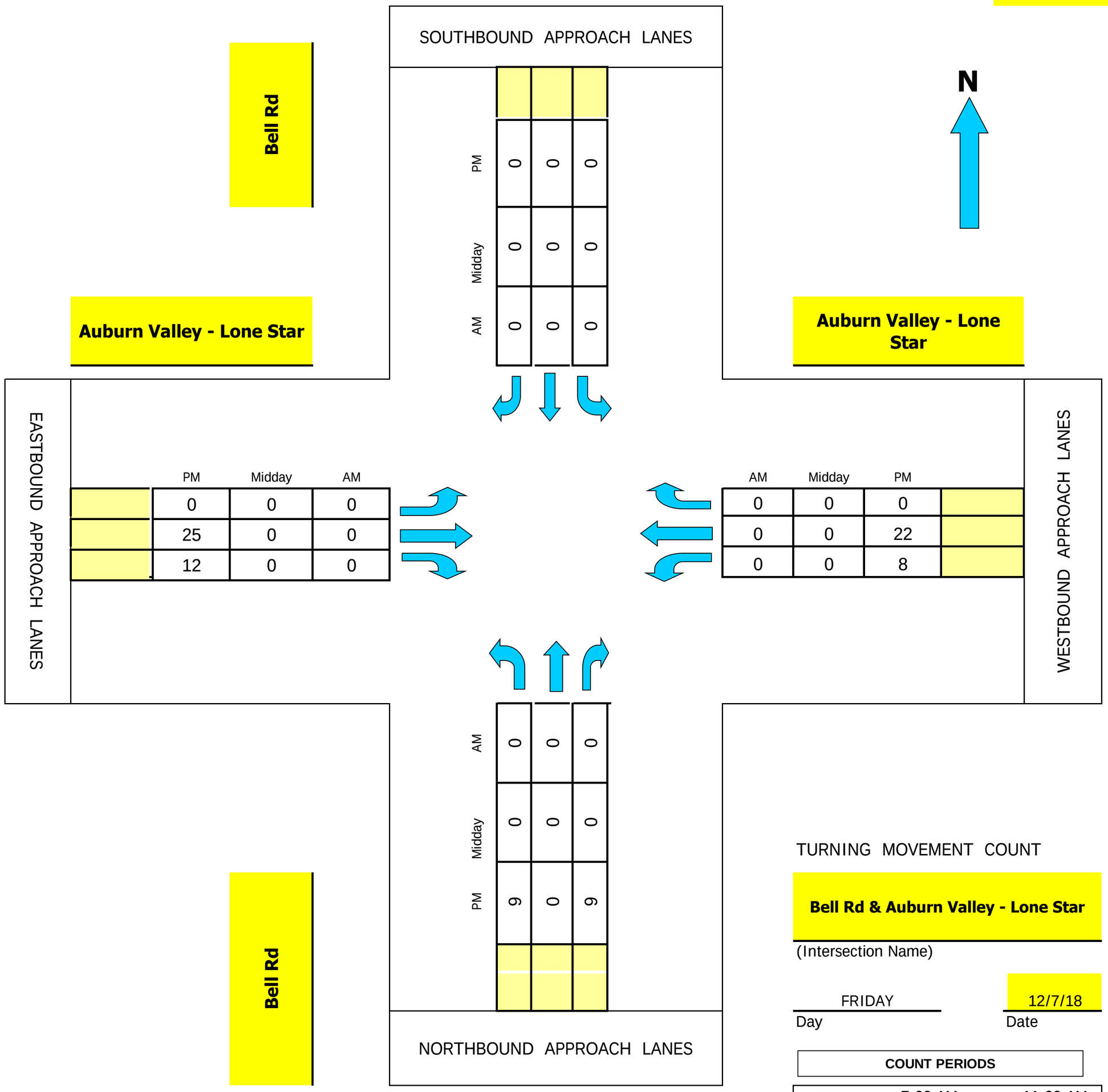
CONTROL:

Intersection Turning Movement

Prepared by:
KD Anderson Associates, Inc.

TMC Summary of Bell Rd/Auburn Valley - Lone Star

Project #: 0090-09



TURNING MOVEMENT COUNT

Bell Rd & Auburn Valley - Lone Star
(Intersection Name)

FRIDAY — Day
12/7/18 — Date

COUNT PERIODS			
am	7:00 AM	-	11:00 AM
noon	11:00 AM	-	2:00 PM
pm	4:00 PM	-	6:00 PM

AM PEAK HOUR	0 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	415 PM

Intersection Turning Movement

Prepared by:

N-S STREET: Bell Rd DATE: 12/7/18 LOCATION: Placer County

E-W STREET: Auburn Valley - Lone Star DAY: FRIDAY PROJECT# 0090-09

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0		4					5	2	2	3		16
4:15 PM	2		4					7	2	3	4		22
4:30 PM	4		3					6	1	2	6		22
4:45 PM	1		1					4	6	1	9		22
5:00 PM	2		1					8	3	2	3		19
5:15 PM	1		0					1	0	2	4		8
5:30 PM	1		2					2	4	1	5		15
5:45 PM	1		2					3	2	0	3		11
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	12	0	17	0	0	0	0	36	20	13	37	0	135

PM Peak Hr Begins at: 415 PM

PEAK VOLUMES =	9	0	9	0	0	0	0	25	12	8	22	0	85
PEAK HR. FACTOR:		0.643			0.000			0.841			0.750		0.966

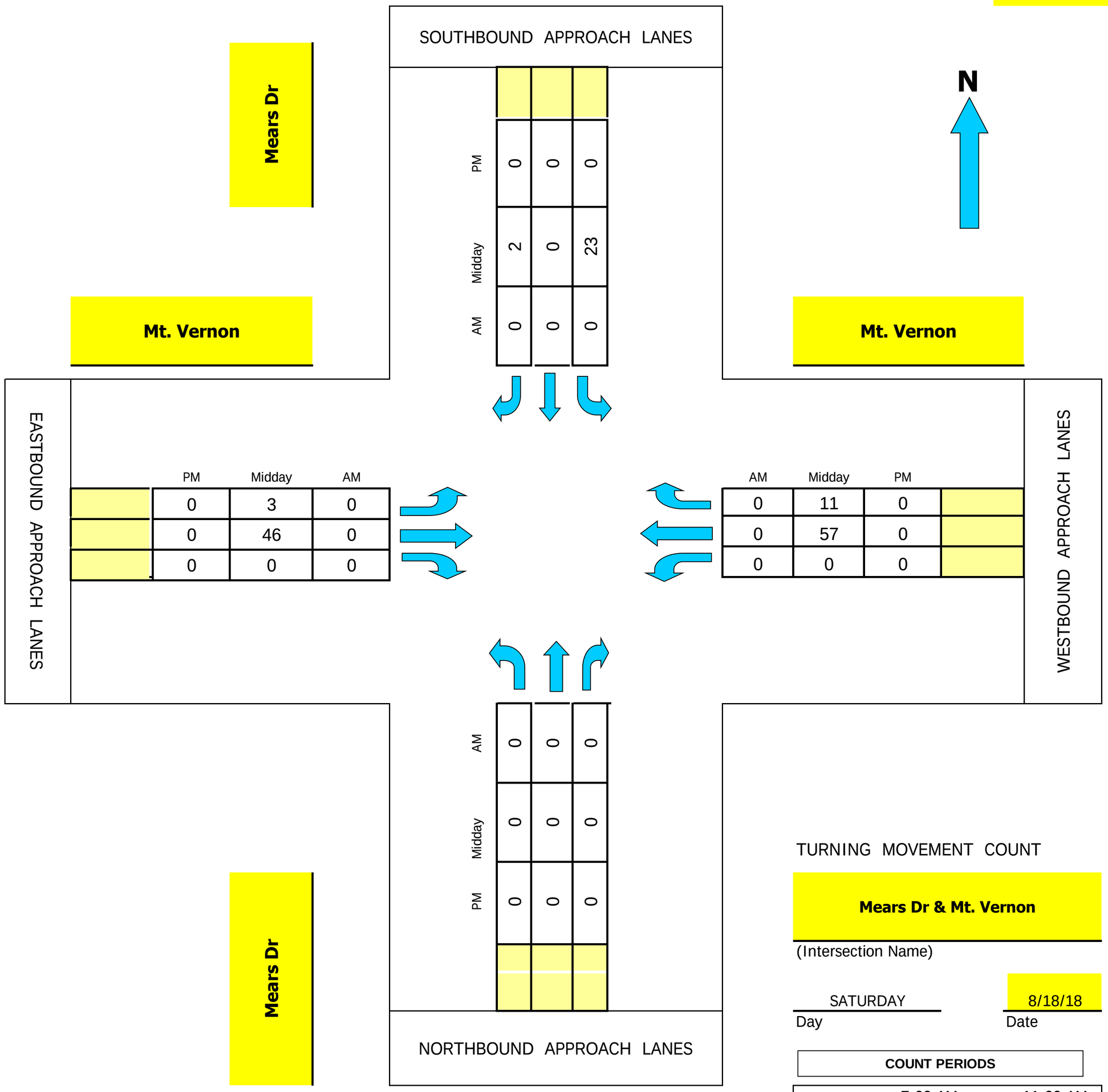
CONTROL:

Intersection Turning Movement

Prepared by:
KD Anderson Associates, Inc.

TMC Summary of Mears Dr/Mt. Vernon

Project #: 0090-09



TURNING MOVEMENT COUNT

Mears Dr & Mt. Vernon
(Intersection Name)

SATURDAY — Day
8/18/18 — Date

COUNT PERIODS			
am	7:00 AM	-	11:00 AM
noon	11:00 AM	-	2:00 PM
pm	4:00 PM	-	6:00 PM

AM PEAK HOUR	0 AM
NOON PEAK HOUR	1230 PM
PM PEAK HOUR	0 AM

Intersection Turning Movement

Prepared by:

N-S STREET: Mears Dr DATE: 8/18/18 LOCATION: Placer County

E-W STREET: Mt. Vernon DAY: SATURDAY PROJECT# 0090-09

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
12:00 PM				6		0	1	6			10	7	30
12:15 PM				1		1	1	9			12	4	28
12:30 PM				9		1	1	16			14	3	44
12:45 PM				4		1	0	14			10	2	31
1:00 PM				2		0	1	11			18	2	34
1:15 PM				8		0	1	5			15	4	33
1:30 PM				4		2	1	8			8	5	28
1:45 PM				6		1	0	14			17	2	40
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	0	0	0	40	0	6	6	83	0	0	104	29	268

NOON Peak Hr Begins at: 1230 PM

PEAK VOLUMES =	0	0	0	23	0	2	3	46	0	0	57	11	142
PEAK HR. FACTOR:		0.000			0.625			0.000			0.850		0.807

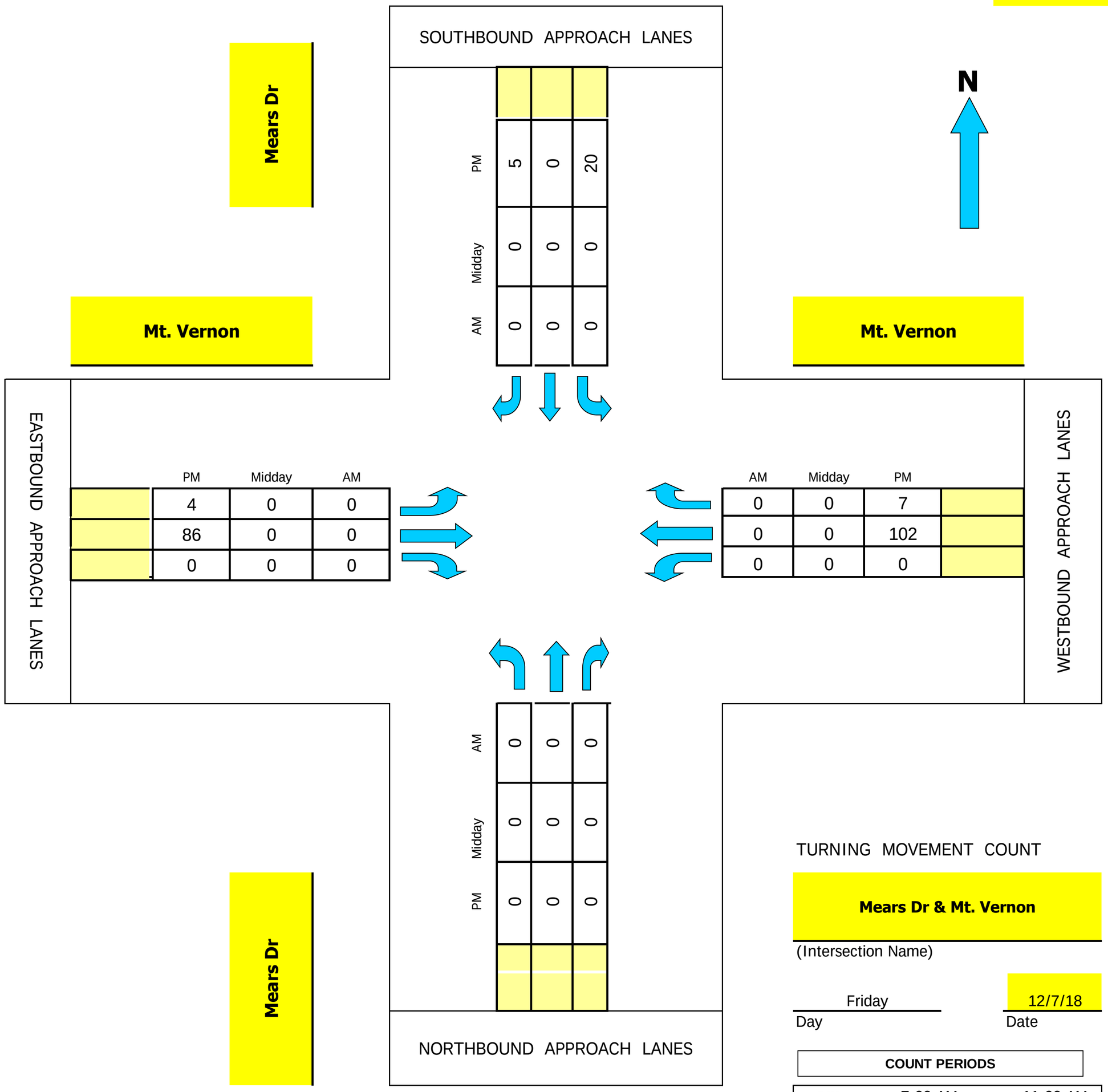
CONTROL:

Intersection Turning Movement

Prepared by:
KD Anderson Associates, Inc.

TMC Summary of Mears Dr/Mt. Vernon

Project #: 0090-09



TURNING MOVEMENT COUNT

Mears Dr & Mt. Vernon

(Intersection Name)

Friday — Day

12/7/18 — Date

COUNT PERIODS			
am	7:00 AM	-	11:00 AM
noon	11:00 AM	-	2:00 PM
pm	4:00 PM	-	6:00 PM

AM PEAK HOUR 0 AM

NOON PEAK HOUR 0 AM

PM PEAK HOUR 415 PM

Intersection Turning Movement

Prepared by:

N-S STREET: Mears Dr DATE: 12/7/18 LOCATION: Placer County

E-W STREET: Mt. Vernon DAY: FRIDAY PROJECT# 0090-09

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM				2		5	0	17			22	4	50
4:15 PM				4		0	1	20			25	3	53
4:30 PM				7		3	3	22			30	1	66
4:45 PM				7		0	0	20			19	1	47
5:00 PM				2		2	0	24			28	2	58
5:15 PM				2		0	0	20			16	4	42
5:30 PM				4		0	0	14			19	2	39
5:45 PM				3		0	0	10			14	2	29
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	31	0	10	4	147	0	0	173	19	384

PM Peak Hr Begins at: 415 PM

PEAK VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	20	0	5	4	86	0	0	102	7	224
PEAK HR. FACTOR:		0.000			0.625			0.900			0.879		0.848

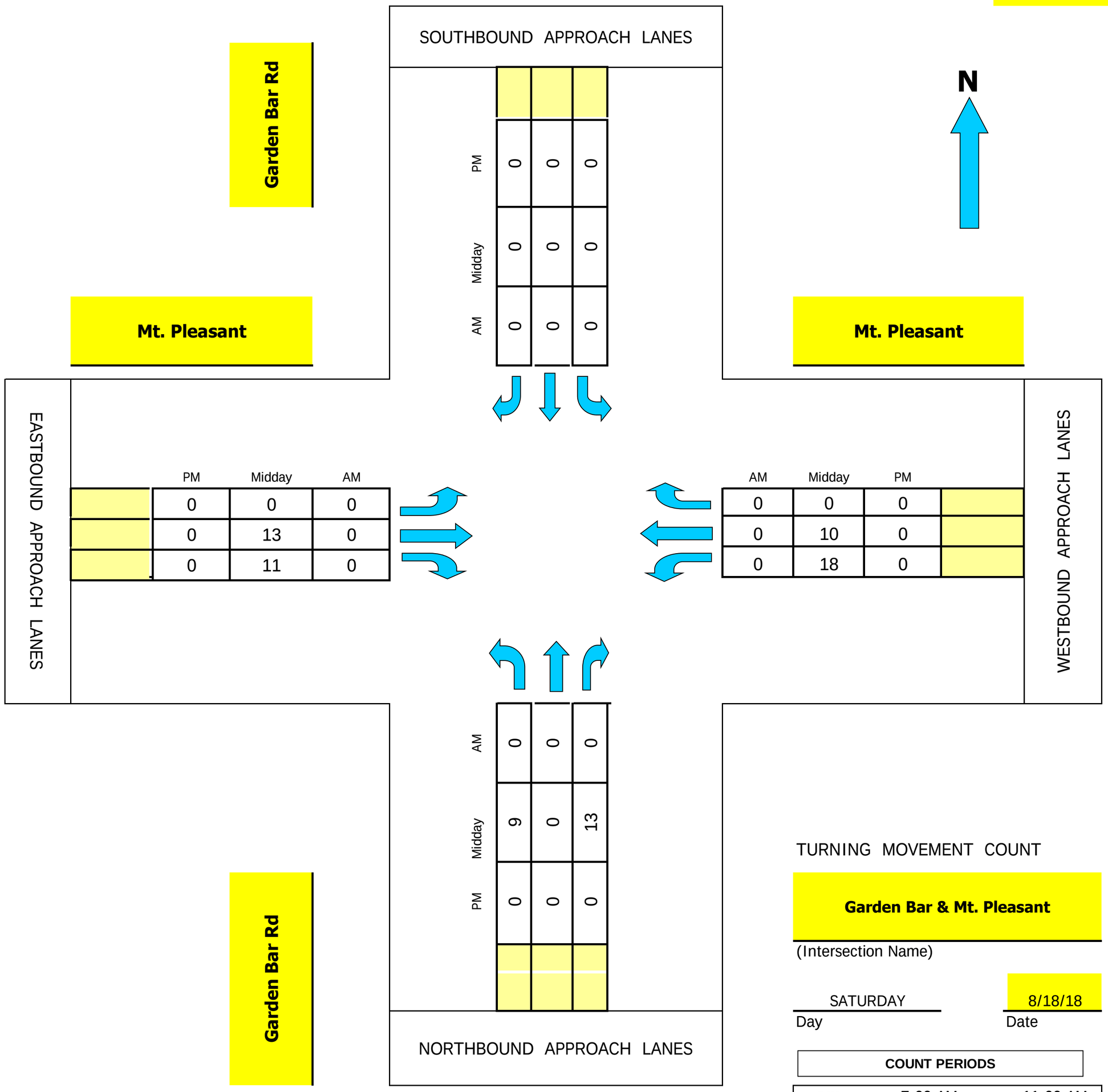
CONTROL:

Intersection Turning Movement

Prepared by:
KD Anderson Associates, Inc.

TMC Summary of Garden Bar Rd/Mt. Pleasant

Project #: 0090-09



TURNING MOVEMENT COUNT

Garden Bar & Mt. Pleasant
(Intersection Name)

SATURDAY — Day
8/18/18 — Date

COUNT PERIODS			
am	7:00 AM	-	11:00 AM
noon	11:00 AM	-	2:00 PM
pm	4:00 PM	-	6:00 PM

AM PEAK HOUR 0 AM

NOON PEAK HOUR 1200 PM

PM PEAK HOUR 0 AM

Intersection Turning Movement

Prepared by:

N-S STREET: Garden Bar Rd DATE: 8/18/18 LOCATION: Placer County

E-W STREET: Mt. Pleasant DAY: SATURDAY PROJECT# 0090-09

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
12:00 PM	1		5					1	5	4	1		17
12:15 PM	1		1					5	2	2	2		13
12:30 PM	4		5					6	1	1	1		18
12:45 PM	3		2					1	3	11	6		26
1:00 PM	2		4					1	2	3	2		14
1:15 PM	1		5					0	1	2	1		10
1:30 PM	2		4					3	2	2	5		18
1:45 PM	1		4					1	1	1	2		10
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	15	0	30	0	0	0	0	18	17	26	20	0	126

NOON Peak Hr Begins at: 1200 PM

PEAK VOLUMES =	9	0	13	0	0	0	0	13	11	18	10	0	74
PEAK HR. FACTOR:		0.611			0.000			0.857			0.000		0.712

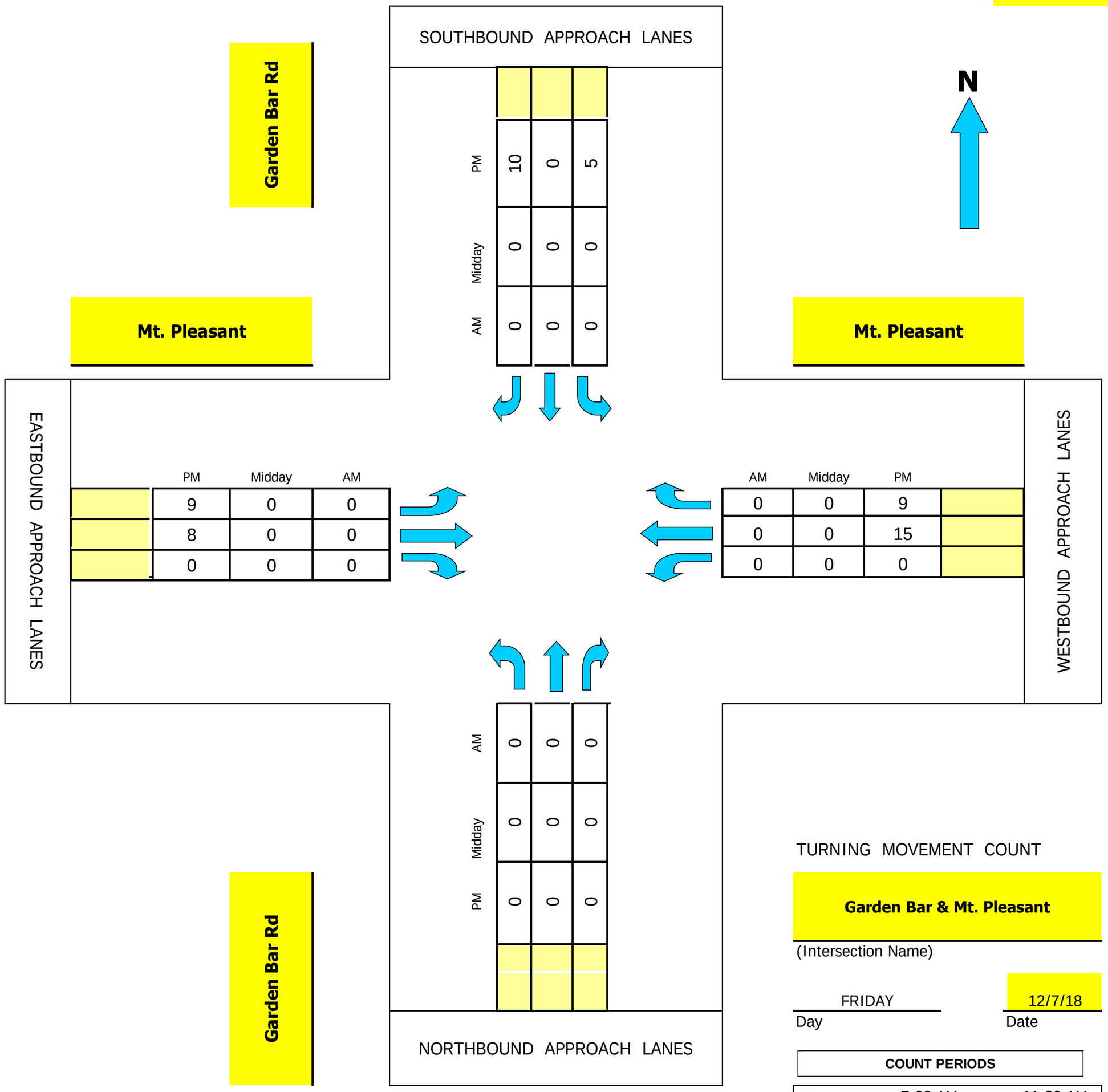
CONTROL:

Intersection Turning Movement

Prepared by:
KD Anderson Associates, Inc.

TMC Summary of Garden Bar Rd/Mt. Pleasant

Project #: 0090-09



TURNING MOVEMENT COUNT

Garden Bar & Mt. Pleasant
(Intersection Name)

FRIDAY — Day
12/7/18 — Date

COUNT PERIODS			
am	7:00 AM	-	11:00 AM
noon	11:00 AM	-	2:00 PM
pm	4:00 PM	-	6:00 PM

AM PEAK HOUR	0 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

Intersection Turning Movement

Prepared by:

N-S STREET: Garden Bar Rd DATE: 12/7/18 LOCATION: Placer County

E-W STREET: Mt. Pleasant DAY: FRIDAY PROJECT# 0090-09

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM				1		1	1	1			6	1	11
4:15 PM				7		1	0	4			2	1	15
4:30 PM				2		3	3	2			4	1	15
4:45 PM				1		1	2	0			4	4	12
5:00 PM				2		3	1	4			3	1	14
5:15 PM				0		3	3	2			4	3	15
5:30 PM				4		0	3	0			3	0	10
5:45 PM				1		0	0	0			3	0	4
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	18	0	12	13	13	0	0	29	11	96

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	5	0	10	9	8	0	0	15	9	56
PEAK HR. FACTOR:		0.000			0.750			0.850			0.750		0.933

CONTROL:

Average Daily Traffic Volumes
Quality Traffic Data, LLC

QTD PROJ/LOC #:	2016210 - 002	GPS COORDINATES:	38.94923, -121.15847
ON STREET:	Mears Drive	START DATE:	Saturday, May 21, 2016
CROSS STREETS:	north of Mt. Vernon Road	VICINITY:	Placer

AM COUNTS							PM COUNTS						
	NB		SB		EB	WB		NB		SB		EB	WB
00:00	0		0				12:00	11		13			
00:15	0		0				12:15	8		7			
00:30	0		1				12:30	3		6			
00:45	0	*0*	0	*1*		***1***	12:45	4	*26*	5	*31*		***57***
01:00	0		0				13:00	5		8			
01:15	0		0				13:15	4		6			
01:30	0		0				13:30	5		8			
01:45	0	*0*	0	*0*			13:45	9	*23*	10	*32*		***55***
02:00	0		0				14:00	3		6			
02:15	1		1				14:15	5		9			
02:30	1		1				14:30	6		6			
02:45	0	*2*	0	*2*		***4***	14:45	6	*20*	3	*24*		***44***
03:00	0		0				15:00	2		3			
03:15	0		0				15:15	5		5			
03:30	0		0				15:30	2		4			
03:45	0	*0*	0	*0*			15:45	5	*14*	2	*14*		***28***
04:00	0		0				16:00	8		7			
04:15	0		0				16:15	1		3			
04:30	0		0				16:30	2		4			
04:45	1	*1*	0	*0*		***1***	16:45	9	*20*	3	*17*		***37***
05:00	0		0				17:00	3		4			
05:15	1		0				17:15	9		3			
05:30	2		0				17:30	2		4			
05:45	0	*3*	0	*0*		***3***	17:45	1	*15*	1	*12*		***27***
06:00	2		0				18:00	3		8			
06:15	2		0				18:15	2		5			
06:30	3		1				18:30	3		2			
06:45	6	*13*	1	*2*		***15***	18:45	1	*9*	2	*17*		***26***
07:00	8		1				19:00	2		2			
07:15	10		1				19:15	1		1			
07:30	5		1				19:30	0		4			
07:45	9	*32*	4	*7*		***39***	19:45	0	*3*	2	*9*		***12***
08:00	11		1				20:00	3		3			
08:15	11		4				20:15	4		2			
08:30	10		6				20:30	2		2			
08:45	12	*44*	3	*14*		***58***	20:45	2	*11*	1	*8*		***19***
09:00	18		6				21:00	0		1			
09:15	6		4				21:15	0		1			
09:30	10		6				21:30	3		2			
09:45	11	*45*	8	*24*		***69***	21:45	0	*3*	0	*4*		***7***
10:00	7		11				22:00	1		0			
10:15	7		9				22:15	0		1			
10:30	7		5				22:30	1		1			
10:45	7	*28*	8	*33*		***61***	22:45	1	*3*	0	*2*		***5***
11:00	8		15				23:00	1		0			
11:15	6		11				23:15	0		0			
11:30	8		7				23:30	0		0			
11:45	6	*28*	1	*34*		***62***	23:45	0	*1*	1	*1*		***2***
TOTALS:		**196**		**117**		**313**	**TOTALS:**		**148**		**171**		**319**

SPLIT	62.6%	37.4%			**49.5%**	**SPLIT**	46.4%	53.6%		**50.5%**
PEAK HOUR	08:15	10:45			**08:15**	PEAK HOUR	12:00	13:30		**12:00**
PH VOLUME	51	41			**70**	PH VOLUME	26	33		**57**
PHF	0.71	0.68			**0.73**	PHF	0.57	0.83		**0.59**

DAY'S TOTAL

NB	SB	EB	WB	TOTAL
344	288			**632**

QUALITY TRAFFIC DATA, LLC
9701 W Pico Blvd, Suite 205, Los Angeles, CA, 90035
Phone: 310-341-0019 Fax: 310-807-9247 Info@QualityTrafficData.com

Average Daily Traffic Volumes
Quality Traffic Data, LLC

QTD PROJ/LOC #:	2016210 - 002	GPS COORDINATES:	38.94923, -121.15847
ON STREET:	Mears Drive	START DATE:	Saturday, May 28, 2016
CROSS STREETS:	north of Mt. Vernon Road	VICINITY:	Placer

AM COUNTS							PM COUNTS						
	NB		SB		EB	WB		NB		SB		EB	WB
00:00	0		0				12:00	16		9			
00:15	0		0				12:15	9		10			
00:30	0		1				12:30	8		11			
00:45	0	*0*	0	*1*		*1*	12:45	13	*46*	6	*36*		*82*
01:00	0		0				13:00	11		17			
01:15	0		1				13:15	6		14			
01:30	0		0				13:30	12		17			
01:45	0	*0*	0	*1*		*1*	13:45	9	*38*	20	*68*		*106*
02:00	1		1				14:00	15		6			
02:15	0		1				14:15	10		11			
02:30	1		0				14:30	9		10			
02:45	0	*2*	0	*2*		*4*	14:45	6	*40*	8	*35*		*75*
03:00	0		1				15:00	6		11			
03:15	0		1				15:15	6		5			
03:30	0		0				15:30	8		10			
03:45	0	*0*	0	*2*		*2*	15:45	3	*23*	8	*34*		*57*
04:00	0		0				16:00	5		6			
04:15	0		0				16:15	7		4			
04:30	0		0				16:30	4		13			
04:45	2	*2*	0	*0*		*2*	16:45	5	*21*	9	*32*		*53*
05:00	0		4				17:00	1		4			
05:15	1		0				17:15	6		14			
05:30	1		1				17:30	4		3			
05:45	3	*5*	0	*5*		*10*	17:45	2	*13*	10	*31*		*44*
06:00	0		1				18:00	2		4			
06:15	2		0				18:15	7		6			
06:30	2		0				18:30	4		4			
06:45	8	*12*	0	*1*		*13*	18:45	1	*14*	3	*17*		*31*
07:00	8		0				19:00	1		5			
07:15	6		1				19:15	2		4			
07:30	5		0				19:30	2		9			
07:45	7	*26*	4	*5*		*31*	19:45	4	*9*	5	*23*		*32*
08:00	9		8				20:00	3		6			
08:15	12		3				20:15	4		4			
08:30	7		4				20:30	1		1			
08:45	9	*37*	3	*18*		*55*	20:45	1	*9*	1	*12*		*21*
09:00	12		6				21:00	2		3			
09:15	38		8				21:15	1		1			
09:30	13		18				21:30	1		1			
09:45	12	*75*	8	*40*		*115*	21:45	2	*6*	0	*5*		*11*
10:00	13		7				22:00	0		0			
10:15	11		4				22:15	1		0			
10:30	9		4				22:30	0		1			
10:45	22	*55*	5	*20*		*75*	22:45	0	*1*	0	*1*		*2*
11:00	13		9				23:00	0		0			
11:15	17		12				23:15	0		0			
11:30	13		11				23:30	1		0			
11:45	15	*58*	11	*43*		*101*	23:45	0	*1*	0	*0*		*1*
TOTALS:		**272**		**138**		**410**	**TOTALS:**		**221**		**294**		**515**

SPLIT	66.3%	33.7%			**44.3%**	**SPLIT**	42.9%	57.1%		**55.7%**
PEAK HOUR	09:15	11:00			**09:15**	PEAK HOUR	12:00	13:00		**13:00**
PH VOLUME	76	43			**117**	PH VOLUME	46	68		**106**
PHF	0.50	0.90			**0.64**	PHF	0.64	0.85		**0.91**

DAY'S TOTAL

NB	SB	EB	WB	TOTAL
493	432			**925**

QUALITY TRAFFIC DATA, LLC
9701 W Pico Blvd, Suite 205, Los Angeles, CA, 90035
Phone: 310-341-0019 Fax: 310-807-9247 Info@QualityTrafficData.com

Average Daily Traffic Volumes
Quality Traffic Data, LLC

QTD PROJ/LOC #:	2016210 - 002	GPS COORDINATES:	38.94923, -121.15847
ON STREET:	Mears Drive	START DATE:	Saturday, June 04, 2016
CROSS STREETS:	north of Mt. Vernon Road	VICINITY:	Placer

AM COUNTS							PM COUNTS						
	NB		SB		EB	WB		NB		SB		EB	WB
00:00	0		0				12:00	24		14			
00:15	0		0				12:15	24		15			
00:30	0		0				12:30	11		12			
00:45	0	*0*	0	*0*			12:45	15	*74*	7	*48*		*122*
01:00	0		0				13:00	13		12			
01:15	0		1				13:15	13		7			
01:30	0		0				13:30	10		9			
01:45	0	*0*	0	*1*		*1*	13:45	16	*52*	9	*37*		*89*
02:00	0		0				14:00	9		12			
02:15	1		1				14:15	11		11			
02:30	0		0				14:30	9		6			
02:45	0	*1*	0	*1*		*2*	14:45	7	*36*	10	*39*		*75*
03:00	0		0				15:00	8		6			
03:15	0		0				15:15	9		13			
03:30	0		0				15:30	10		5			
03:45	0	*0*	0	*0*			15:45	9	*36*	12	*36*		*72*
04:00	0		0				16:00	4		13			
04:15	0		0				16:15	9		9			
04:30	0		0				16:30	4		8			
04:45	1	*1*	0	*0*		*1*	16:45	7	*24*	13	*43*		*67*
05:00	1		1				17:00	5		3			
05:15	1		0				17:15	7		16			
05:30	0		0				17:30	6		7			
05:45	1	*3*	0	*1*		*4*	17:45	6	*24*	4	*30*		*54*
06:00	1		0				18:00	4		4			
06:15	0		1				18:15	3		8			
06:30	3		2				18:30	4		6			
06:45	4	*8*	0	*3*		*11*	18:45	1	*12*	7	*25*		*37*
07:00	8		1				19:00	3		2			
07:15	1		0				19:15	5		1			
07:30	2		1				19:30	2		1			
07:45	4	*15*	2	*4*		*19*	19:45	4	*14*	4	*8*		*22*
08:00	6		5				20:00	1		6			
08:15	13		2				20:15	3		3			
08:30	10		2				20:30	1		3			
08:45	15	*44*	5	*14*		*58*	20:45	3	*8*	3	*15*		*23*
09:00	11		7				21:00	0		3			
09:15	18		4				21:15	1		5			
09:30	33		3				21:30	1		1			
09:45	11	*73*	1	*15*		*88*	21:45	0	*2*	0	*9*		*11*
10:00	14		8				22:00	0		0			
10:15	12		6				22:15	0		0			
10:30	10		10				22:30	0		0			
10:45	16	*52*	9	*33*		*85*	22:45	1	*1*	0	*0*		*1*
11:00	18		10				23:00	0		1			
11:15	24		10				23:15	2		0			
11:30	19		24				23:30	2		0			
11:45	13	*74*	19	*63*		*137*	23:45	0	*4*	0	*1*		*5*
TOTALS:		**271**		**135**		**406**	**TOTALS:**		**287**		**291**		**578**

SPLIT	66.7%	33.3%		**41.3%**	SPLIT	49.7%	50.3%		**58.7%**
PEAK HOUR	11:15	11:30		**11:30**	PEAK HOUR	12:00	12:00		**12:00**
PH VOLUME	80	72		**152**	PH VOLUME	74	48		**122**
PHF	0.83	0.75		**0.88**	PHF	0.73	0.80		**0.78**

DAY'S TOTAL

NB	SB	EB	WB	TOTAL
558	426			**984**

QUALITY TRAFFIC DATA, LLC
9701 W Pico Blvd, Suite 205, Los Angeles, CA, 90035
Phone: 310-341-0019 Fax: 310-807-9247 Info@QualityTrafficData.com

Prepared by NDS/ATD

VOLUME

Mears Dr Bet. Mt Vernon Rd & 7970 Mears Dr

Day: Saturday
Date: 10/8/2016

City: Auburn
Project #: CA16_7715_002

DAILY TOTALS	NB	SB	EB	WB	Total
	304	310	0	0	614

AM Period	NB		SB		EB		WB		TOTAL	
00:00	0		0						0	
00:15	0		0						0	
00:30	0		0						0	
00:45	0		0						0	
01:00	0		0						0	
01:15	0		0						0	
01:30	0		0						0	
01:45	0		0						0	
02:00	0		0						0	
02:15	0		0						0	
02:30	0		0						0	
02:45	0		0						0	
03:00	0		0						0	
03:15	0		0						0	
03:30	0		0						0	
03:45	0		0						0	
04:00	0		0						0	
04:15	0		0						0	
04:30	0		0						0	
04:45	0		0						0	
05:00	0		0						0	
05:15	0		0						0	
05:30	0		0						0	
05:45	0		0						0	
06:00	0		0						0	
06:15	3		0						3	
06:30	2		0						2	
06:45	4	9	0						4	9
07:00	3		1						4	
07:15	2		0						2	
07:30	1		1						2	
07:45	4	10	0	2					4	12
08:00	4		0						4	
08:15	8		2						10	
08:30	9		3						12	
08:45	8	29	2	7					10	36
09:00	11		3						14	
09:15	9		3						12	
09:30	9		3						12	
09:45	9	38	7	16					16	54
10:00	12		7						19	
10:15	9		8						17	
10:30	4		5						9	
10:45	10	35	9	29					19	64
11:00	7		8						15	
11:15	7		12						19	
11:30	11		13						24	
11:45	9	34	12	45					21	79
TOTALS		155		99						**254**
SPLIT %		61.0%		39.0%						**41.4%**

PM Period	NB		SB		EB		WB		TOTAL	
12:00	8		1						9	
12:15	10		9						19	
12:30	6		9						15	
12:45	11	35	7	26					18	61
13:00	7		9						16	
13:15	5		5						10	
13:30	8		9						17	
13:45	6	26	13	36					19	62
14:00	4		9						13	
14:15	8		9						17	
14:30	2		8						10	
14:45	3	17	9	35					12	52
15:00	2		3						5	
15:15	5		6						11	
15:30	7		7						14	
15:45	7	21	5	21					12	42
16:00	3		7						10	
16:15	6		10						16	
16:30	5		8						13	
16:45	4	18	5	30					9	48
17:00	3		9						12	
17:15	3		7						10	
17:30	8		10						18	
17:45	4	18	6	32					10	50
18:00	1		12						13	
18:15	3		4						7	
18:30	1		2						3	
18:45	1	6	1	19					2	25
19:00	1		1						2	
19:15	0		5						5	
19:30	1		1						2	
19:45	0	2	0	7					0	9
20:00	0		0						0	
20:15	1		1						2	
20:30	0		0						0	
20:45	1	2	1	2					2	4
21:00	1		1						2	
21:15	0		0						0	
21:30	1		1						2	
21:45	2	4	0	2					2	6
22:00	0		1						1	
22:15	0		0						0	
22:30	0		0						0	
22:45	0		0	1					0	1
23:00	0		0						0	
23:15	0		0						0	
23:30	0		0						0	
23:45	0		0						0	
TOTALS		149		211						**360**
SPLIT %		41.4%		58.6%						**58.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	304	310	0	0	614

AM Peak Hour	09:15	11:00			**11:00**	**PM Peak Hour**	12:00	13:30			**12:15**
AM Pk Volume	39	45			**79**	**PM Pk Volume**	35	40			**68**
Pk Hr Factor	0.813	0.865			**0.823**	**Pk Hr Factor**	0.795	0.769			**0.895**
7 - 9 Volume	39	9	0	0	**48**	**4 - 6 Volume**	36	62	0	0	**98**
7 - 9 Peak Hour	08:00	08:00			**08:00**	**4 - 6 Peak Hour**	16:00	16:15			**16:15**
7 - 9 Pk Volume	29	7	0	0	**36**	**4 - 6 Pk Volume**	18	32	0	0	**50**
Pk Hr Factor	0.806	0.583	0.000	0.000	**0.750**	**Pk Hr Factor**	0.750	0.800	0.000	0.000	**0.781**

Prepared by NDS/ATD

VOLUME

Mears Dr N/O Mt Vernon Rd

Day: Friday
Date: 12/7/2018

City: Auburn
Project #: CA18_7414_005

DAILY TOTALS	NB	SB	EB	WB	Total
	246	247	0	0	493

AM Period	NB		SB		EB		WB		TOTAL	
00:00	0		0						0	
00:15	0		0						0	
00:30	0		0						0	
00:45	0		0						0	
01:00	0		0						0	
01:15	0		0						0	
01:30	0		0						0	
01:45	0		0						0	
02:00	0		0						0	
02:15	0		0						0	
02:30	0		0						0	
02:45	0		0						0	
03:00	0		0						0	
03:15	0		0						0	
03:30	0		1						1	
03:45	0		0	1					0	1
04:00	0		0						0	
04:15	0		0						0	
04:30	0		0						0	
04:45	0		0						0	
05:00	0		0						0	
05:15	0		0						0	
05:30	1		4						5	
05:45	0	1	0	4					0	5
06:00	0		1						1	
06:15	1		3						4	
06:30	1		2						3	
06:45	2	4	3	9					5	13
07:00	8		2						10	
07:15	4		4						8	
07:30	4		2						6	
07:45	3	19	7	15					10	34
08:00	4		4						8	
08:15	3		2						5	
08:30	5		9						14	
08:45	1	13	5	20					6	33
09:00	9		1						10	
09:15	5		1						6	
09:30	11		2						13	
09:45	7	32	4	8					11	40
10:00	4		4						8	
10:15	3		2						5	
10:30	5		7						12	
10:45	5	17	4	17					9	34
11:00	6		7						13	
11:15	2		4						6	
11:30	8		1						9	
11:45	6	22	7	19					13	41
TOTALS		108		93						**201**
SPLIT %		53.7%		46.3%						**40.8%**

PM Period	NB		SB		EB		WB		TOTAL	
12:00	6		9						15	
12:15	5		9						14	
12:30	5		6						11	
12:45	4	20	6	30					10	50
13:00	4		7						11	
13:15	6		3						9	
13:30	4		6						10	
13:45	7	21	7	23					14	44
14:00	3		9						12	
14:15	6		6						12	
14:30	10		5						15	
14:45	2	21	10	30					12	51
15:00	3		3						6	
15:15	6		4						10	
15:30	3		5						8	
15:45	5	17	3	15					8	32
16:00	7		6						13	
16:15	5		4						9	
16:30	4		8						12	
16:45	0	16	8	26					8	42
17:00	2		3						5	
17:15	2		2						4	
17:30	4		4						8	
17:45	2	10	3	12					5	22
18:00	2		1						3	
18:15	2		3						5	
18:30	2		0						2	
18:45	2	8	3	7					5	15
19:00	0		0						0	
19:15	0		2						2	
19:30	5		0						5	
19:45	1	6	2	4					3	10
20:00	0		2						2	
20:15	1		2						3	
20:30	2		1						3	
20:45	7	10	0	5					7	15
21:00	2		2						4	
21:15	1		0						1	
21:30	0		0						0	
21:45	0	3	0	2					0	5
22:00	3		0						3	
22:15	0		0						0	
22:30	0		0						0	
22:45	1	4	0						1	4
23:00	0		0						0	
23:15	1		0						1	
23:30	0		0						0	
23:45	1	2	0						1	2
TOTALS		138		154						**292**
SPLIT %		47.3%		52.7%						**59.2%**

DAILY TOTALS	NB	SB	EB	WB	Total
	246	247	0	0	493

AM Peak Hour	09:00	11:45			**11:45**
AM Pk Volume	32	31			**53**
Pk Hr Factor	0.727	0.861			**0.883**
7 - 9 Volume	32	35	0	0	**67**
7 - 9 Peak Hour	07:00	07:45			**07:45**
7 - 9 Pk Volume	19	22	0	0	**37**
Pk Hr Factor	0.594	0.611	0.000	0.000	**0.661**

PM Peak Hour	13:45	12:00			**13:45**
PM Pk Volume	26	30			**53**
Pk Hr Factor	0.650	0.833			**0.883**
4 - 6 Volume	26	38	0	0	**64**
4 - 6 Peak Hour	16:00	16:00			**16:00**
4 - 6 Pk Volume	16	26	0	0	**42**
Pk Hr Factor	0.571	0.813	0.000	0.000	**0.808**

Prepared by NDS/ATD

VOLUME

Mt Vernon Rd Bet. Ayers Holmes Rd & Buffalo Rd

Day: Saturday
Date: 10/8/2016

City: Auburn
Project #: CA16_7715_003

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	633	611	1,244

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			1		1		2		12:00			13		14		27	
00:15			1		0		1		12:15			10		11		21	
00:30			1		0		1		12:30			11		10		21	
00:45			1	4	0	1	1	5	12:45			12	46	8	43	20	89
01:00			2		0		2		13:00			11		17		28	
01:15			0		1		1		13:15			10		16		26	
01:30			2		2		4		13:30			12		7		19	
01:45			1	5	0	3	1	8	13:45			13	46	20	60	33	106
02:00			0		1		1		14:00			9		11		20	
02:15			0		0		0		14:15			14		17		31	
02:30			0		0		0		14:30			6		7		13	
02:45			0		0	1	0	1	14:45			11	40	12	47	23	87
03:00			1		0		1		15:00			15		13		28	
03:15			1		0		1		15:15			14		9		23	
03:30			0		0		0		15:30			7		8		15	
03:45			2	4	0		2	4	15:45			18	54	14	44	32	98
04:00			1		1		2		16:00			13		11		24	
04:15			0		0		0		16:15			12		13		25	
04:30			1		1		2		16:30			12		12		24	
04:45			5	7	3	5	8	12	16:45			7	44	17	53	24	97
05:00			1		0		1		17:00			11		9		20	
05:15			1		1		2		17:15			7		15		22	
05:30			4		0		4		17:30			10		6		16	
05:45			4	10	2	3	6	13	17:45			5	33	6	36	11	69
06:00			2		1		3		18:00			12		11		23	
06:15			2		2		4		18:15			3		16		19	
06:30			4		4		8		18:30			3		14		17	
06:45			4	12	2	9	6	21	18:45			2	20	6	47	8	67
07:00			2		0		2		19:00			4		8		12	
07:15			3		4		7		19:15			4		5		9	
07:30			3		9		12		19:30			8		7		15	
07:45			11	19	5	18	16	37	19:45			5	21	6	26	11	47
08:00			7		3		10		20:00			6		5		11	
08:15			9		11		20		20:15			2		4		6	
08:30			10		6		16		20:30			6		5		11	
08:45			7	33	8	28	15	61	20:45			6	20	2	16	8	36
09:00			7		16		23		21:00			3		5		8	
09:15			18		10		28		21:15			5		1		6	
09:30			13		11		24		21:30			6		4		10	
09:45			10	48	10	47	20	95	21:45			3	17	2	12	5	29
10:00			16		5		21		22:00			1		3		4	
10:15			7		13		20		22:15			2		6		8	
10:30			48		14		62		22:30			2		6		8	
10:45			14	85	14	46	28	131	22:45			3	8	1	16	4	24
11:00			10		13		23		23:00			2		3		5	
11:15			13		12		25		23:15			2		2		4	
11:30			17		12		29		23:30			2		1		3	
11:45			10	50	6	43	16	93	23:45			1	7	1	7	2	14
TOTALS				277		204		481	TOTALS				356		407		763
SPLIT %				57.6%		42.4%		38.7%	SPLIT %				46.7%		53.3%		61.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	633	611	1,244

AM Peak Hour			10:00	10:15	10:30	PM Peak Hour	15:45	13:00	13:00
AM Pk Volume			85	54	138	PM Pk Volume	55	60	106
Pk Hr Factor			0.443	0.964	0.556	Pk Hr Factor	0.764	0.750	0.803
7 - 9 Volume	0	0	52	46	98	4 - 6 Volume	0 0	77	89	166
7 - 9 Peak Hour			07:45	07:30	07:45	4 - 6 Peak Hour	16:00	16:00	16:00
7 - 9 Pk Volume	0	0	37	28	62	4 - 6 Pk Volume	0 0	44	53	97
Pk Hr Factor	0.000	0.000	0.841	0.636	0.775	Pk Hr Factor	0.000 0.000	0.846	0.779	0.970

Prepared by NDS/ATD

VOLUME

Mt Vernon Rd Bet. Ayers Holmes Rd & Mears Dr

Day: Friday
Date: 12/7/2018

City: Auburn
Project #: CA18_7414_006

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	853	861	1,714

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			0		1		1		12:00			13		14		27	
00:15			0		1		1		12:15			17		20		37	
00:30			0		0		0		12:30			10		17		27	
00:45			1	1	0	2	1	3	12:45			10	50	14	65	24	115
01:00			0		1		1		13:00			10		13		23	
01:15			0		0		0		13:15			9		17		26	
01:30			0		0		0		13:30			17		20		37	
01:45			0		0	1	0	1	13:45			10	46	11	61	21	107
02:00			0		0		0		14:00			11		12		23	
02:15			0		0		0		14:15			18		19		37	
02:30			1		0		1		14:30			13		12		25	
02:45			0	1	0		0	1	14:45			16	58	16	59	32	117
03:00			0		1		1		15:00			15		15		30	
03:15			1		2		3		15:15			10		16		26	
03:30			3		0		3		15:30			23		25		48	
03:45			0	4	0	3	0	7	15:45			24	72	24	80	48	152
04:00			1		0		1		16:00			18		23		41	
04:15			4		4		8		16:15			22		25		47	
04:30			3		2		5		16:30			22		19		41	
04:45			3	11	2	8	5	19	16:45			19	81	31	98	50	179
05:00			3		2		5		17:00			25		22		47	
05:15			2		6		8		17:15			14		21		35	
05:30			8		5		13		17:30			12		20		32	
05:45			8	21	4	17	12	38	17:45			12	63	14	77	26	140
06:00			9		3		12		18:00			8		18		26	
06:15			13		10		23		18:15			4		7		11	
06:30			16		6		22		18:30			9		12		21	
06:45			14	52	9	28	23	80	18:45			7	28	4	41	11	69
07:00			21		9		30		19:00			4		11		15	
07:15			16		12		28		19:15			2		12		14	
07:30			28		10		38		19:30			5		5		10	
07:45			22	87	16	47	38	134	19:45			1	12	7	35	8	47
08:00			13		14		27		20:00			3		10		13	
08:15			14		11		25		20:15			2		2		4	
08:30			17		17		34		20:30			2		5		7	
08:45			17	61	11	53	28	114	20:45			7	14	4	21	11	35
09:00			12		9		21		21:00			2		10		12	
09:15			14		8		22		21:15			3		4		7	
09:30			14		11		25		21:30			9		4		13	
09:45			13	53	9	37	22	90	21:45			4	18	2	20	6	38
10:00			15		10		25		22:00			3		4		7	
10:15			13		9		22		22:15			4		4		8	
10:30			13		12		25		22:30			3		4		7	
10:45			8	49	12	43	20	92	22:45			1	11	0	12	1	23
11:00			14		15		29		23:00			2		2		4	
11:15			13		11		24		23:15			1		0		1	
11:30			15		10		25		23:30			2		2		4	
11:45			9	51	11	47	20	98	23:45			4	9	2	6	6	15
TOTALS				391		286		677	TOTALS				462		575		1037
SPLIT %				57.8%		42.2%		39.5%	SPLIT %				44.6%		55.4%		60.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	853	861	1,714

AM Peak Hour				07:00	11:45	07:00		PM Peak Hour				16:15	16:00	16:15
AM Pk Volume				87	62	134		PM Pk Volume				88	98	185
Pk Hr Factor				0.777	0.775	0.882		Pk Hr Factor				0.880	0.790	0.925
7 - 9 Volume	0	0		148	100	248		4 - 6 Volume	0	0		144	175	319
7 - 9 Peak Hour				07:00	07:45	07:00		4 - 6 Peak Hour				16:15	16:00	16:15
7 - 9 Pk Volume	0	0		87	58	134		4 - 6 Pk Volume	0	0		88	98	185
Pk Hr Factor	0.000	0.000		0.777	0.853	0.882		Pk Hr Factor	0.000	0.000		0.880	0.790	0.925

Prepared by NDS/ATD

VOLUME

Mt Vernon Rd Bet. Hastings Ln & Meyer Ln

Day: Saturday
Date: 6/10/2017

City: Auburn
Project #: CA17_7498_024

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,348	1,331	2,679

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			0		0		0		**12:00**			31		21		52	
00:15			0		0		0		**12:15**			21		20		41	
00:30			2		2		4		**12:30**			25		26		51	
00:45			1	3	1	3	2	6	**12:45**			22	99	26	93	48	192
01:00			2		1		3		**13:00**			30		21		51	
01:15			0		1		1		**13:15**			18		29		47	
01:30			1		1		2		**13:30**			25		26		51	
01:45			0	3	0	3	0	6	**13:45**			25	98	30	106	55	204
02:00			0		1		1		**14:00**			15		30		45	
02:15			1		0		1		**14:15**			30		34		64	
02:30			0		0		0		**14:30**			24		33		57	
02:45			0	1	1	2	1	3	**14:45**			24	93	20	117	44	210
03:00			1		0		1		**15:00**			19		27		46	
03:15			0		1		1		**15:15**			21		30		51	
03:30			0		0		0		**15:30**			29		17		46	
03:45			1	2	1	2	2	4	**15:45**			22	91	21	95	43	186
04:00			0		0		0		**16:00**			24		27		51	
04:15			0		1		1		**16:15**			35		24		59	
04:30			2		0		2		**16:30**			29		27		56	
04:45			4	6	1	2	5	8	**16:45**			30	118	18	96	48	214
05:00			1		2		3		**17:00**			33		22		55	
05:15			2		0		2		**17:15**			23		17		40	
05:30			3		1		4		**17:30**			20		22		42	
05:45			9	15	1	4	10	19	**17:45**			21	97	24	85	45	182
06:00			3		3		6		**18:00**			17		16		33	
06:15			4		5		9		**18:15**			19		12		31	
06:30			8		6		14		**18:30**			11		15		26	
06:45			12	27	6	20	18	47	**18:45**			10	57	14	57	24	114
07:00			10		12		22		**19:00**			11		10		21	
07:15			14		13		27		**19:15**			13		8		21	
07:30			12		16		28		**19:30**			10		14		24	
07:45			11	47	15	56	26	103	**19:45**			14	48	8	40	22	88
08:00			14		23		37		**20:00**			10		7		17	
08:15			18		19		37		**20:15**			8		4		12	
08:30			25		23		48		**20:30**			9		14		23	
08:45			22	79	24	89	46	168	**20:45**			12	39	10	35	22	74
09:00			23		16		39		**21:00**			11		10		21	
09:15			35		28		63		**21:15**			8		7		15	
09:30			29		25		54		**21:30**			5		9		14	
09:45			23	110	28	97	51	207	**21:45**			2	26	6	32	8	58
10:00			28		27		55		**22:00**			6		8		14	
10:15			39		22		61		**22:15**			3		6		9	
10:30			34		38		72		**22:30**			5		3		8	
10:45			35	136	24	111	59	247	**22:45**			6	20	3	20	9	40
11:00			27		28		55		**23:00**			2		6		8	
11:15			26		46		72		**23:15**			5		10		15	
11:30			41		29		70		**23:30**			4		14		18	
11:45			27	121	25	128	52	249	**23:45**			1	12	8	38	9	50
TOTALS				550		517		**1067**	**TOTALS**				798		814		**1612**
SPLIT %				51.5%		48.5%		**39.8%**	**SPLIT %**				49.5%		50.5%		**60.2%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,348	1,331	2,679

AM Peak Hour				10:00	10:30	**10:30**		**PM Peak Hour**				16:15	13:45	**13:45**
AM Pk Volume				136	136	**258**		**PM Pk Volume**				127	127	**221**
Pk Hr Factor				0.872	0.739	**0.896**		**Pk Hr Factor**				0.907	0.934	**0.863**
7 - 9 Volume	0	0		126	145	**271**		**4 - 6 Volume**	0	0		215	181	**396**
7 - 9 Peak Hour				08:00	08:00	**08:00**		**4 - 6 Peak Hour**				16:15	16:00	**16:15**
7 - 9 Pk Volume	0	0		79	89	**168**		**4 - 6 Pk Volume**	0	0		127	96	**218**
Pk Hr Factor	0.000	0.000		0.790	0.927	**0.875**		**Pk Hr Factor**	0.000	0.000		0.907	0.889	**0.924**

Prepared by NDS/ATD

VOLUME

Mt Vernon Rd Bet. Hastings Ln & Meyer Ln

Day: Tuesday
Date: 10/3/2017

City: Auburn
Project #: CA17_7775_024

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	998	1,012	2,010

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			0		0		0		12:00			12		23		35	
00:15			0		0		0		12:15			22		14		36	
00:30			0		0		0		12:30			10		8		18	
00:45			0		0		0		12:45			18	62	18	63	36	125
01:00			0		0		0		13:00			11		16		27	
01:15			0		0		0		13:15			7		17		24	
01:30			1		0		1		13:30			19		18		37	
01:45			0	1	0		0	1	13:45			17	54	10	61	27	115
02:00			0		0		0		14:00			19		13		32	
02:15			0		0		0		14:15			21		9		30	
02:30			2		0		2		14:30			16		15		31	
02:45			0	2	0		0	2	14:45			19	75	30	67	49	142
03:00			0		0		0		15:00			18		20		38	
03:15			1		0		1		15:15			14		29		43	
03:30			0		0		0		15:30			12		24		36	
03:45			3	4	0		3	4	15:45			14	58	15	88	29	146
04:00			1		3		4		16:00			20		30		50	
04:15			4		1		5		16:15			17		32		49	
04:30			0		4		4		16:30			20		28		48	
04:45			3	8	0	8	3	16	16:45			20	77	28	118	48	195
05:00			1		0		1		17:00			19		36		55	
05:15			1		6		7		17:15			15		25		40	
05:30			13		1		14		17:30			12		36		48	
05:45			12	27	5	12	17	39	17:45			13	59	25	122	38	181
06:00			11		3		14		18:00			9		17		26	
06:15			10		6		16		18:15			15		20		35	
06:30			11		11		22		18:30			13		14		27	
06:45			23	55	10	30	33	85	18:45			4	41	12	63	16	104
07:00			24		9		33		19:00			6		11		17	
07:15			25		9		34		19:15			5		16		21	
07:30			36		10		46		19:30			6		8		14	
07:45			42	127	20	48	62	175	19:45			6	23	7	42	13	65
08:00			31		11		42		20:00			4		9		13	
08:15			21		12		33		20:15			5		9		14	
08:30			21		17		38		20:30			4		11		15	
08:45			19	92	11	51	30	143	20:45			4	17	5	34	9	51
09:00			18		6		24		21:00			3		4		7	
09:15			16		12		28		21:15			2		4		6	
09:30			26		12		38		21:30			1		9		10	
09:45			15	75	17	47	32	122	21:45			4	10	4	21	8	31
10:00			13		13		26		22:00			1		3		4	
10:15			21		14		35		22:15			0		0		0	
10:30			15		12		27		22:30			1		2		3	
10:45			14	63	15	54	29	117	22:45			1	3	3	8	4	11
11:00			20		20		40		23:00			1		3		4	
11:15			9		15		24		23:15			0		2		2	
11:30			17		15		32		23:30			0		2		2	
11:45			17	63	18	68	35	131	23:45			1	2	0	7	1	9
TOTALS				517		318		835	TOTALS				481		694		1175
SPLIT %				61.9%		38.1%		41.5%	SPLIT %				40.9%		59.1%		58.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	998	1,012	2,010

AM Peak Hour				07:15	11:15	07:15		PM Peak Hour				16:00	16:45	16:15
AM Pk Volume				134	71	184		PM Pk Volume				77	125	200
Pk Hr Factor				0.798	0.772	0.742		Pk Hr Factor				0.963	0.868	0.909
7 - 9 Volume	0	0		219	99	318		4 - 6 Volume	0	0		136	240	376
7 - 9 Peak Hour				07:15	07:45	07:15		4 - 6 Peak Hour				16:00	16:45	16:15
7 - 9 Pk Volume	0	0		134	60	184		4 - 6 Pk Volume	0	0		77	125	200
Pk Hr Factor	0.000	0.000		0.798	0.750	0.742		Pk Hr Factor	0.000	0.000		0.963	0.868	0.909

Prepared by NDS/ATD

VOLUME

Garden Bar Rd Bet. Mt Pleasant Rd & Wise Rd

Day: Saturday
Date: 10/8/2016

City: Auburn
Project #: CA16_7715_005

DAILY TOTALS	NB	SB	EB	WB	Total
	335	356	0	0	691

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	3		0						3		12:00	5		9						14	
00:15	0		1						1		12:15	6		7						13	
00:30	1		1						2		12:30	5		2						7	
00:45	1	5	0	2					1	7	12:45	3	19	7	25					10	44
01:00	0		0						0		13:00	5		8						13	
01:15	0		0						0		13:15	8		7						15	
01:30	0		0						0		13:30	10		10						20	
01:45	0		1	1					1	1	13:45	3	26	6	31					9	57
02:00	0		0						0		14:00	7		4						11	
02:15	0		0						0		14:15	9		4						13	
02:30	0		0						0		14:30	3		6						9	
02:45	0		0						0		14:45	8	27	8	22					16	49
03:00	0		0						0		15:00	5		7						12	
03:15	0		0						0		15:15	17		7						24	
03:30	0		0						0		15:30	7		0						7	
03:45	1	1	0						1	1	15:45	14	43	6	20					20	63
04:00	0		1						1		16:00	10		2						12	
04:15	0		0						0		16:15	4		2						6	
04:30	0		0						0		16:30	7		5						12	
04:45	0		0	1					0	1	16:45	5	26	6	15					11	41
05:00	0		0						0		17:00	5		2						7	
05:15	0		3						3		17:15	5		7						12	
05:30	0		0						0		17:30	6		8						14	
05:45	1	1	2	5					3	6	17:45	3	19	7	24					10	43
06:00	1		0						1		18:00	7		5						12	
06:15	0		6						6		18:15	6		2						8	
06:30	0		2						2		18:30	6		5						11	
06:45	0	1	3	11					3	12	18:45	5	24	7	19					12	43
07:00	2		4						6		19:00	7		3						10	
07:15	1		1						2		19:15	0		3						3	
07:30	4		5						9		19:30	5		2						7	
07:45	4	11	6	16					10	27	19:45	3	15	6	14					9	29
08:00	0		2						2		20:00	2		2						4	
08:15	0		8						8		20:15	3		0						3	
08:30	1		9						10		20:30	2		3						5	
08:45	8	9	7	26					15	35	20:45	3	10	0	5					3	15
09:00	6		5						11		21:00	5		5						10	
09:15	4		2						6		21:15	3		4						7	
09:30	5		8						13		21:30	5		1						6	
09:45	5	20	6	21					11	41	21:45	4	17	1	11					5	28
10:00	3		8						11		22:00	3		2						5	
10:15	17		30						47		22:15	1		0						1	
10:30	4		6						10		22:30	3		3						6	
10:45	2	26	7	51					9	77	22:45	2	9	0	5					2	14
11:00	5		2						7		23:00	3		0						3	
11:15	6		11						17		23:15	0		0						0	
11:30	3		6						9		23:30	3		3						6	
11:45	4	18	8	27					12	45	23:45	2	8	1	4					3	12
TOTALS		92		161						253	TOTALS		243		195						438
SPLIT %		36.4%		63.6%						36.6%	SPLIT %		55.5%		44.5%						63.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	335	356	0	0	691

AM Peak Hour	09:30	09:30			09:30	PM Peak Hour	15:15	12:45			15:00
AM Pk Volume	30	52			82	PM Pk Volume	48	32			63
Pk Hr Factor	0.441	0.433			0.436	Pk Hr Factor	0.706	0.800			0.656
7 - 9 Volume	20	42	0	0	62	4 - 6 Volume	45	39	0	0	84
7 - 9 Peak Hour	07:00	08:00			08:00	4 - 6 Peak Hour	16:00	17:00			16:45
7 - 9 Pk Volume	11	26	0	0	35	4 - 6 Pk Volume	26	24	0	0	44
Pk Hr Factor	0.688	0.722	0.000	0.000	0.583	Pk Hr Factor	0.650	0.750	0.000	0.000	0.786

Prepared by NDS/ATD

VOLUME

Garden Bar Rd S/O Mt Pleasant Rd

Day: Friday
Date: 12/7/2018

City: Lincoln
Project #: CA18_7414_010

DAILY TOTALS	NB	SB	EB	WB	Total
	367	381	0	0	748

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	0		0				0		**12:00**	4		3				7	
00:15	0		0				0		**12:15**	8		6				14	
00:30	0		0				0		**12:30**	3		3				6	
00:45	1	1	0				1	1	**12:45**	7	22	3	15			10	37
01:00	0		0				0		**13:00**	2		3				5	
01:15	0		0				0		**13:15**	6		5				11	
01:30	0		0				0		**13:30**	11		4				15	
01:45	0		0				0		**13:45**	5	24	7	19			12	43
02:00	0		0				0		**14:00**	4		9				13	
02:15	0		0				0		**14:15**	8		5				13	
02:30	1		0				1		**14:30**	7		5				12	
02:45	0	1	0				0	1	**14:45**	7	26	5	24			12	50
03:00	0		0				0		**15:00**	11		9				20	
03:15	0		0				0		**15:15**	10		5				15	
03:30	0		0				0		**15:30**	13		7				20	
03:45	0		1	1			1	1	**15:45**	11	45	9	30			20	75
04:00	0		2				2		**16:00**	3		7				10	
04:15	0		0				0		**16:15**	5		13				18	
04:30	0		2				2		**16:30**	12		8				20	
04:45	0		3	7			3	7	**16:45**	13	33	4	32			17	65
05:00	0		2				2		**17:00**	14		4				18	
05:15	0		3				3		**17:15**	10		5				15	
05:30	0		3				3		**17:30**	9		3				12	
05:45	1	1	7	15			8	16	**17:45**	9	42	4	16			13	58
06:00	0		8				8		**18:00**	9		8				17	
06:15	1		7				8		**18:15**	8		3				11	
06:30	1		10				11		**18:30**	4		3				7	
06:45	1	3	9	34			10	37	**18:45**	1	22	6	20			7	42
07:00	2		13				15		**19:00**	5		2				7	
07:15	2		11				13		**19:15**	4		5				9	
07:30	3		18				21		**19:30**	4		1				5	
07:45	6	13	16	58			22	71	**19:45**	5	18	1	9			6	27
08:00	4		10				14		**20:00**	6		1				7	
08:15	1		7				8		**20:15**	3		0				3	
08:30	3		8				11		**20:30**	1		4				5	
08:45	4	12	3	28			7	40	**20:45**	6	16	0	5			6	21
09:00	7		8				15		**21:00**	3		1				4	
09:15	6		4				10		**21:15**	2		0				2	
09:30	2		6				8		**21:30**	1		1				2	
09:45	5	20	3	21			8	41	**21:45**	3	9	1	3			4	12
10:00	5		3				8		**22:00**	8		2				10	
10:15	4		4				8		**22:15**	2		0				2	
10:30	4		7				11		**22:30**	4		2				6	
10:45	3	16	5	19			8	35	**22:45**	2	16	0	4			2	20
11:00	1		5				6		**23:00**	2		0				2	
11:15	10		7				17		**23:15**	3		0				3	
11:30	5		1				6		**23:30**	0		1				1	
11:45	6	22	7	20			13	42	**23:45**	0	5	0	1			0	6
TOTALS		89		203				**292**	**TOTALS**		278		178				**456**
SPLIT %		30.5%		69.5%				**39.0%**	**SPLIT %**		61.0%		39.0%				**61.0%**

DAILY TOTALS	NB	SB	EB	WB	Total
	367	381	0	0	748

AM Peak Hour	11:15		07:00				**07:00**		**PM Peak Hour**	16:30		15:45				**15:00**	
AM Pk Volume	25		58				**71**		**PM Pk Volume**	49		37				**75**	
Pk Hr Factor	0.625		0.806				**0.807**		**Pk Hr Factor**	0.875		0.712				**0.938**	
7 - 9 Volume	25		86		0	0	**111**		**4 - 6 Volume**	75		48		0	0	**123**	
7 - 9 Peak Hour	07:15		07:00				**07:00**		**4 - 6 Peak Hour**	16:30		16:00				**16:15**	
7 - 9 Pk Volume	15		58		0	0	**71**		**4 - 6 Pk Volume**	49		32		0	0	**73**	
Pk Hr Factor	0.625		0.806		0.000	0.000	**0.807**		**Pk Hr Factor**	0.875		0.615		0.000	0.000	**0.913**	

Prepared by NDS/ATD

VOLUME

Garden Bar Rd Bet. Mt Pleasant Rd & Private Rd

Day: Saturday
Date: 10/8/2016

City: Auburn
Project #: CA16_7715_006

DAILY TOTALS	NB	SB	EB	WB	Total
	166	150	0	0	316

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	1		0						1		12:00	3		4						7	
00:15	0		1						1		12:15	0		4						4	
00:30	0		0						0		12:30	6		1						7	
00:45	1	2	0	1					1	3	12:45	3	12	2	11					5	23
01:00	0		0						0		13:00	1		2						3	
01:15	0		0						0		13:15	5		3						8	
01:30	0		0						0		13:30	2		4						6	
01:45	0		1	1					1	1	13:45	6	14	1	10					7	24
02:00	0		0						0		14:00	2		4						6	
02:15	0		0						0		14:15	0		4						4	
02:30	0		0						0		14:30	1		1						2	
02:45	0		0						0		14:45	1	4	5	14					6	18
03:00	0		0						0		15:00	2		1						3	
03:15	0		0						0		15:15	8		4						12	
03:30	0		0						0		15:30	6		2						8	
03:45	0		0						0		15:45	2	18	1	8					3	26
04:00	0		0						0		16:00	1		2						3	
04:15	0		0						0		16:15	2		3						5	
04:30	0		0						0		16:30	4		1						5	
04:45	1	1	0						1	1	16:45	0	7	1	7					1	14
05:00	0		0						0		17:00	5		3						8	
05:15	0		0						0		17:15	4		3						7	
05:30	0		2						2		17:30	4		5						9	
05:45	0		0	2					0	2	17:45	3	16	4	15					7	31
06:00	1		1						2		18:00	6		1						7	
06:15	1		1						2		18:15	3		1						4	
06:30	0		1						1		18:30	4		3						7	
06:45	0	2	0	3					0	5	18:45	2	15	3	8					5	23
07:00	2		4						6		19:00	4		2						6	
07:15	2		3						5		19:15	2		1						3	
07:30	0		2						2		19:30	0		3						3	
07:45	5	9	2	11					7	20	19:45	2	8	1	7					3	15
08:00	0		2						2		20:00	5		2						7	
08:15	0		3						3		20:15	1		0						1	
08:30	2		4						6		20:30	1		0						1	
08:45	4	6	0	9					4	15	20:45	0	7	1	3					1	10
09:00	3		4						7		21:00	1		0						1	
09:15	1		2						3		21:15	0		0						0	
09:30	3		7						10		21:30	2		0						2	
09:45	1	8	4	17					5	25	21:45	2	5	2	2					4	7
10:00	2		8						10		22:00	3		0						3	
10:15	1		3						4		22:15	2		0						2	
10:30	2		0						2		22:30	1		2						3	
10:45	1	6	2	13					3	19	22:45	0	6	2	4					2	10
11:00	5		0						5		23:00	1		0						1	
11:15	3		2						5		23:15	0		0						0	
11:30	3		0						3		23:30	1		0						1	
11:45	6	17	2	4					8	21	23:45	1	3	0						1	3
TOTALS		51		61						112	TOTALS		115		89						204
SPLIT %		45.5%		54.5%						35.4%	SPLIT %		56.4%		43.6%						64.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	166	150	0	0	316

AM Peak Hour	11:00	09:30			09:30	PM Peak Hour	15:00	17:00			17:00
AM Pk Volume	17	22			29	PM Pk Volume	18	15			31
Pk Hr Factor	0.708	0.688			0.725	Pk Hr Factor	0.563	0.750			0.861
7 - 9 Volume	15	20	0	0	35	4 - 6 Volume	23	22	0	0	45
7 - 9 Peak Hour	07:00	07:00			07:00	4 - 6 Peak Hour	17:00	17:00			17:00
7 - 9 Pk Volume	9	11	0	0	20	4 - 6 Pk Volume	16	15	0	0	31
Pk Hr Factor	0.450	0.688	0.000	0.000	0.714	Pk Hr Factor	0.800	0.750	0.000	0.000	0.861

Prepared by NDS/ATD

VOLUME

Garden Bar Rd N/O Mt Pleasant Rd

Day: Friday
Date: 12/7/2018

City: Lincoln
Project #: CA18_7414_009

DAILY TOTALS	NB	SB	EB	WB	Total
	157	161	0	0	318

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	0		0						0		12:00	2		2						4	
00:15	0		0						0		12:15	4		6						10	
00:30	0		0						0		12:30	4		4						8	
00:45	0		0						0		12:45	2	12	2	14					4	26
01:00	0		0						0		13:00	3		0						3	
01:15	0		0						0		13:15	4		1						5	
01:30	0		0						0		13:30	5		4						9	
01:45	0		0						0		13:45	4	16	1	6					5	22
02:00	0		0						0		14:00	6		6						12	
02:15	0		0						0		14:15	2		3						5	
02:30	1		0						1		14:30	1		4						5	
02:45	0	1	0						0	1	14:45	1	10	2	15					3	25
03:00	0		0						0		15:00	5		1						6	
03:15	0		0						0		15:15	1		3						4	
03:30	0		0						0		15:30	4		11						15	
03:45	0		0						0		15:45	5	15	3	18					8	33
04:00	0		0						0		16:00	2		1						3	
04:15	0		0						0		16:15	0		8						8	
04:30	0		1						1		16:30	4		4						8	
04:45	0		0	1					0	1	16:45	6	12	3	16					9	28
05:00	0		1						1		17:00	2		5						7	
05:15	0		0						0		17:15	6		3						9	
05:30	0		1						1		17:30	3		4						7	
05:45	1	1	2	4					3	5	17:45	0	11	1	13					1	24
06:00	0		5						5		18:00	1		3						4	
06:15	0		1						1		18:15	3		1						4	
06:30	1		1						2		18:30	2		2						4	
06:45	1	2	1	8					2	10	18:45	2	8	2	8					4	16
07:00	1		3						4		19:00	0		0						0	
07:15	1		0						1		19:15	3		1						4	
07:30	1		4						5		19:30	2		0						2	
07:45	1	4	3	10					4	14	19:45	1	6	0	1					1	7
08:00	0		3						3		20:00	3		1						4	
08:15	0		4						4		20:15	2		0						2	
08:30	2		1						3		20:30	0		2						2	
08:45	3	5	1	9					4	14	20:45	2	7	0	3					2	10
09:00	7		2						9		21:00	0		0						0	
09:15	3		2						5		21:15	1		0						1	
09:30	1		3						4		21:30	0		0						0	
09:45	1	12	1	8					2	20	21:45	1	2	0						1	2
10:00	2		2						4		22:00	1		1						2	
10:15	0		2						2		22:15	1		0						1	
10:30	5		1						6		22:30	3		0						3	
10:45	4	11	7	12					11	23	22:45	2	7	0	1					2	8
11:00	4		1						5		23:00	0		0						0	
11:15	6		3						9		23:15	0		2						2	
11:30	4		4						8		23:30	0		0						0	
11:45	1	15	4	12					5	27	23:45	0		0	2					0	2
TOTALS		51		64						115	TOTALS		106		97						203
SPLIT %		44.3%		55.7%						36.2%	SPLIT %		52.2%		47.8%						63.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	157	161	0	0	318

AM Peak Hour	10:30	11:30			10:45	PM Peak Hour	13:15	15:30		15:30
AM Pk Volume	19	16			33	PM Pk Volume	19	23		34
Pk Hr Factor	0.792	0.667			0.750	Pk Hr Factor	0.792	0.523		0.567
7 - 9 Volume	9	19	0	0	28	4 - 6 Volume	23	29	0	0	52
7 - 9 Peak Hour	08:00	07:30			07:30	4 - 6 Peak Hour	16:30	16:15			16:30
7 - 9 Pk Volume	5	14	0	0	16	4 - 6 Pk Volume	18	20	0	0	33
Pk Hr Factor	0.417	0.875	0.000	0.000	0.800	Pk Hr Factor	0.750	0.625	0.000	0.000	0.917

Prepared by NDS/ATD

VOLUME

Bell Rd Bet. Mallard Way & Cramer Rd

Day: Saturday
Date: 6/10/2017

City: Auburn
Project #: CA17_7498_012

DAILY TOTALS	NB	SB	EB	WB	Total
	248	295	0	0	543

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	0		0						0		**12:00**	2		4						6	
00:15	1		0						1		**12:15**	2		2						4	
00:30	0		0						0		**12:30**	6		7						13	
00:45	1	2	1	1					2	3	**12:45**	1	11	4	17					5	28
01:00	1		0						1		**13:00**	5		3						8	
01:15	1		2						3		**13:15**	6		2						8	
01:30	0		0						0		**13:30**	9		5						14	
01:45	0	2	0	2					0	4	**13:45**	6	26	5	15					11	41
02:00	1		0						1		**14:00**	4		5						9	
02:15	0		0						0		**14:15**	3		9						12	
02:30	2		0						2		**14:30**	5		6						11	
02:45	0	3	1	1					1	4	**14:45**	4	16	10	30					14	46
03:00	0		0						0		**15:00**	7		10						17	
03:15	1		0						1		**15:15**	6		8						14	
03:30	0		1						1		**15:30**	8		7						15	
03:45	2	3	0	1					2	4	**15:45**	7	28	5	30					12	58
04:00	0		2						2		**16:00**	5		2						7	
04:15	1		0						1		**16:15**	3		3						6	
04:30	0		1						1		**16:30**	6		4						10	
04:45	0	1	0	3					0	4	**16:45**	3	17	5	14					8	31
05:00	2		1						3		**17:00**	5		3						8	
05:15	1		1						2		**17:15**	5		7						12	
05:30	1		2						3		**17:30**	2		4						6	
05:45	3	7	1	5					4	12	**17:45**	1	13	2	16					3	29
06:00	1		2						3		**18:00**	4		6						10	
06:15	1		2						3		**18:15**	2		4						6	
06:30	1		2						3		**18:30**	6		3						9	
06:45	1	4	2	8					3	12	**18:45**	3	15	4	17					7	32
07:00	0		5						5		**19:00**	2		3						5	
07:15	1		2						3		**19:15**	3		4						7	
07:30	1		3						4		**19:30**	3		1						4	
07:45	3	5	4	14					7	19	**19:45**	1	9	2	10					3	19
08:00	3		9						12		**20:00**	2		3						5	
08:15	2		4						6		**20:15**	2		3						5	
08:30	4		6						10		**20:30**	4		0						4	
08:45	1	10	8	27					9	37	**20:45**	2	10	5	11					7	21
09:00	5		7						12		**21:00**	1		1						2	
09:15	5		2						7		**21:15**	2		1						3	
09:30	4		4						8		**21:30**	5		0						5	
09:45	4	18	3	16					7	34	**21:45**	2	10	2	4					4	14
10:00	2		4						6		**22:00**	4		0						4	
10:15	1		3						4		**22:15**	2		2						4	
10:30	6		4						10		**22:30**	1		4						5	
10:45	4	13	2	13					6	26	**22:45**	0	7	1	7					1	14
11:00	4		9						13		**23:00**	2		0						2	
11:15	3		8						11		**23:15**	1		2						3	
11:30	4		8						12		**23:30**	1		0						1	
11:45	3	14	5	30					8	44	**23:45**	0	4	1	3					1	7
TOTALS		82		121						**203**	**TOTALS**		166		174						**340**
SPLIT %		40.4%		59.6%						**37.4%**	**SPLIT %**		48.8%		51.2%						**62.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	248	295	0	0	543

AM Peak Hour	09:00	11:00			**11:00**	**PM Peak Hour**	15:00	14:15			**14:45**
AM Pk Volume	18	30			**44**	**PM Pk Volume**	28	35			**60**
Pk Hr Factor	0.900	0.833			**0.846**	**Pk Hr Factor**	0.875	0.875			**0.882**
7 - 9 Volume	15	41	0	0	**56**	**4 - 6 Volume**	30	30	0	0	**60**
7 - 9 Peak Hour	07:45	08:00			**08:00**	**4 - 6 Peak Hour**	16:30	16:30			**16:30**
7 - 9 Pk Volume	12	27	0	0	**37**	**4 - 6 Pk Volume**	19	19	0	0	**38**
Pk Hr Factor	0.750	0.750	0.000	0.000	**0.771**	**Pk Hr Factor**	0.792	0.679	0.000	0.000	**0.792**

Prepared by NDS/ATD

VOLUME

Bell Rd Bet. Mallard Way & Cramer Rd

Day: Tuesday
Date: 10/3/2017

City: Auburn
Project #: CA17_7775_012

DAILY TOTALS	NB	SB	EB	WB	Total
	290	324	0	0	614

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	0		0						0		**12:00**	5		5						10	
00:15	0		1						1		**12:15**	5		6						11	
00:30	1		0						1		**12:30**	3		7						10	
00:45	0	1	1	2					1	3	**12:45**	5	18	3	21					8	39
01:00	1		0						1		**13:00**	7		7						14	
01:15	0		0						0		**13:15**	2		2						4	
01:30	0		0						0		**13:30**	4		10						14	
01:45	0	1	0						0	1	**13:45**	3	16	4	23					7	39
02:00	0		0						0		**14:00**	5		5						10	
02:15	0		0						0		**14:15**	5		4						9	
02:30	0		0						0		**14:30**	5		5						10	
02:45	0		0						0		**14:45**	6	21	8	22					14	43
03:00	1		0						1		**15:00**	10		8						18	
03:15	0		0						0		**15:15**	10		6						16	
03:30	0		0						0		**15:30**	7		7						14	
03:45	0	1	0						0	1	**15:45**	9	36	6	27					15	63
04:00	0		1						1		**16:00**	5		4						9	
04:15	0		2						2		**16:15**	9		7						16	
04:30	0		1						1		**16:30**	2		5						7	
04:45	0		2	6					2	6	**16:45**	7	23	4	20					11	43
05:00	0		1						1		**17:00**	16		6						22	
05:15	2		2						4		**17:15**	9		5						14	
05:30	0		2						2		**17:30**	7		6						13	
05:45	0	2	2	7					2	9	**17:45**	5	37	8	25					13	62
06:00	0		3						3		**18:00**	7		3						10	
06:15	1		3						4		**18:15**	8		3						11	
06:30	0		1						1		**18:30**	3		3						6	
06:45	2	3	2	9					4	12	**18:45**	5	23	9	18					14	41
07:00	1		3						4		**19:00**	3		1						4	
07:15	2		8						10		**19:15**	9		2						11	
07:30	2		9						11		**19:30**	8		2						10	
07:45	3	8	8	28					11	36	**19:45**	1	21	1	6					2	27
08:00	6		6						12		**20:00**	2		1						3	
08:15	2		6						8		**20:15**	3		0						3	
08:30	1		7						8		**20:30**	3		2						5	
08:45	3	12	8	27					11	39	**20:45**	3	11	1	4					4	15
09:00	4		11						15		**21:00**	0		1						1	
09:15	3		10						13		**21:15**	2		0						2	
09:30	1		7						8		**21:30**	0		0						0	
09:45	6	14	4	32					10	46	**21:45**	1	3	2	3					3	6
10:00	4		11						15		**22:00**	1		0						1	
10:15	4		4						8		**22:15**	3		1						4	
10:30	3		3						6		**22:30**	0		0						0	
10:45	6	17	4	22					10	39	**22:45**	2	6	1	2					3	8
11:00	7		3						10		**23:00**	0		0						0	
11:15	3		6						9		**23:15**	1		0						1	
11:30	4		5						9		**23:30**	0		0						0	
11:45	1	15	6	20					7	35	**23:45**	0	1	0						0	1
TOTALS		74		153						**227**	**TOTALS**		216		171						**387**
SPLIT %		32.6%		67.4%						**37.0%**	**SPLIT %**		55.8%		44.2%						**63.0%**

DAILY TOTALS	NB	SB	EB	WB	Total
	290	324	0	0	614

AM Peak Hour	10:15	08:30			**08:30**	**PM Peak Hour**	16:45	14:45			**15:00**
AM Pk Volume	20	36			**47**	**PM Pk Volume**	39	29			**63**
Pk Hr Factor	0.714	0.818			**0.783**	**Pk Hr Factor**	0.609	0.906			**0.875**
7 - 9 Volume	20	55	0	0	**75**	**4 - 6 Volume**	60	45	0	0	**105**
7 - 9 Peak Hour	07:15	07:15			**07:15**	**4 - 6 Peak Hour**	16:45	17:00			**17:00**
7 - 9 Pk Volume	13	31	0	0	**44**	**4 - 6 Pk Volume**	39	25	0	0	**62**
Pk Hr Factor	0.542	0.861	0.000	0.000	**0.917**	**Pk Hr Factor**	0.609	0.781	0.000	0.000	**0.705**

Prepared by NDS/ATD

VOLUME

Bell Rd Bet. Coyote Ridge Ct & Miracle Dr

Day: Saturday
Date: 6/10/2017

City: Auburn
Project #: CA17_7498_011

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	682	647	1,329

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			1		2		3		12:00			11		11		22	
00:15			0		2		2		12:15			10		8		18	
00:30			2		2		4		12:30			15		13		28	
00:45			0	3	3	9	3	12	12:45			11	47	14	46	25	93
01:00			1		2		3		13:00			12		17		29	
01:15			0		1		1		13:15			10		17		27	
01:30			1		0		1		13:30			13		17		30	
01:45			0	2	2	5	2	7	13:45			14	49	15	66	29	115
02:00			0		0		0		14:00			11		13		24	
02:15			1		0		1		14:15			12		9		21	
02:30			0		1		1		14:30			12		10		22	
02:45			1	2	0	1	1	3	14:45			19	54	7	39	26	93
03:00			0		1		1		15:00			11		15		26	
03:15			1		0		1		15:15			8		17		25	
03:30			0		1		1		15:30			16		13		29	
03:45			1	2	1	3	2	5	15:45			12	47	11	56	23	103
04:00			0		0		0		16:00			10		10		20	
04:15			1		1		2		16:15			9		12		21	
04:30			1		0		1		16:30			13		18		31	
04:45			0	2	1	2	1	4	16:45			10	42	9	49	19	91
05:00			2		3		5		17:00			14		17		31	
05:15			1		2		3		17:15			14		12		26	
05:30			1		2		3		17:30			6		9		15	
05:45			1	5	2	9	3	14	17:45			14	48	16	54	30	102
06:00			2		2		4		18:00			10		10		20	
06:15			5		2		7		18:15			3		15		18	
06:30			5		2		7		18:30			3		10		13	
06:45			4	16	1	7	5	23	18:45			11	27	12	47	23	74
07:00			3		4		7		19:00			15		10		25	
07:15			6		4		10		19:15			5		12		17	
07:30			11		3		14		19:30			11		15		26	
07:45			10	30	7	18	17	48	19:45			8	39	8	45	16	84
08:00			12		2		14		20:00			7		4		11	
08:15			5		2		7		20:15			8		8		16	
08:30			8		5		13		20:30			6		4		10	
08:45			20	45	5	14	25	59	20:45			2	23	7	23	9	46
09:00			15		14		29		21:00			9		1		10	
09:15			9		6		15		21:15			4		4		8	
09:30			9		9		18		21:30			5		4		9	
09:45			12	45	6	35	18	80	21:45			12	30	5	14	17	44
10:00			16		6		22		22:00			4		5		9	
10:15			14		7		21		22:15			8		5		13	
10:30			11		11		22		22:30			3		5		8	
10:45			11	52	8	32	19	84	22:45			3	18	3	18	6	36
11:00			11		15		26		23:00			1		4		5	
11:15			11		6		17		23:15			1		4		5	
11:30			16		11		27		23:30			4		2		6	
11:45			9	47	10	42	19	89	23:45			1	7	3	13	4	20
TOTALS				251		177		428	TOTALS				431		470		901
SPLIT %				58.6%		41.4%		32.2%	SPLIT %				47.8%		52.2%		67.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	682	647	1,329

AM Peak Hour			08:45	11:00	10:45	PM Peak Hour			14:00	13:00	13:00
AM Pk Volume			53	42	89	PM Pk Volume			54	66	115
Pk Hr Factor			0.663	0.700	0.824	Pk Hr Factor			0.711	0.971	0.958
7 - 9 Volume	0	0	75	32	107	4 - 6 Volume	0	0	90	103	193
7 - 9 Peak Hour			08:00	07:00	08:00	4 - 6 Peak Hour			16:30	16:15	16:30
7 - 9 Pk Volume	0	0	45	18	59	4 - 6 Pk Volume	0	0	51	56	107
Pk Hr Factor	0.000	0.000	0.563	0.643	0.590	Pk Hr Factor	0.000	0.000	0.911	0.778	0.863

Prepared by NDS/ATD

VOLUME

Bell Rd Bet. Coyote Ridge Ct & Miracle Dr

Day: Tuesday
Date: 10/3/2017

City: Auburn
Project #: CA17_7775_011

DAILY TOTALS	NB	SB	EB	WB	Total
	687	713	0	0	1,400

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	0		0						0		**12:00**	13		7						20	
00:15	1		1						2		**12:15**	8		11						19	
00:30	2		1						3		**12:30**	6		13						19	
00:45	0	3	0	2					0	5	**12:45**	10	37	15	46					25	83
01:00	0		0						0		**13:00**	13		11						24	
01:15	0		0						0		**13:15**	11		14						25	
01:30	1		1						2		**13:30**	11		10						21	
01:45	0	1	0	1					0	2	**13:45**	11	46	7	42					18	88
02:00	0		0						0		**14:00**	14		15						29	
02:15	0		0						0		**14:15**	22		12						34	
02:30	2		0						2		**14:30**	10		12						22	
02:45	0	2	0						0	2	**14:45**	17	63	11	50					28	113
03:00	0		0						0		**15:00**	19		10						29	
03:15	0		1						1		**15:15**	20		13						33	
03:30	0		1						1		**15:30**	10		7						17	
03:45	0		1	3					1	3	**15:45**	18	67	11	41					29	108
04:00	1		0						1		**16:00**	17		13						30	
04:15	0		1						1		**16:15**	19		14						33	
04:30	0		2						2		**16:30**	13		12						25	
04:45	1	2	0	3					1	5	**16:45**	17	66	10	49					27	115
05:00	2		3						5		**17:00**	23		9						32	
05:15	1		2						3		**17:15**	20		13						33	
05:30	0		4						4		**17:30**	13		16						29	
05:45	0	3	4	13					4	16	**17:45**	18	74	9	47					27	121
06:00	1		6						7		**18:00**	13		14						27	
06:15	0		5						5		**18:15**	10		10						20	
06:30	1		7						8		**18:30**	12		4						16	
06:45	5	7	10	28					15	35	**18:45**	15	50	13	41					28	91
07:00	9		7						16		**19:00**	12		7						19	
07:15	6		25						31		**19:15**	11		3						14	
07:30	6		22						28		**19:30**	10		4						14	
07:45	6	27	32	86					38	113	**19:45**	7	40	1	15					8	55
08:00	11		21						32		**20:00**	5		2						7	
08:15	5		7						12		**20:15**	7		2						9	
08:30	8		15						23		**20:30**	3		2						5	
08:45	7	31	15	58					22	89	**20:45**	5	20	3	9					8	29
09:00	6		15						21		**21:00**	5		5						10	
09:15	8		14						22		**21:15**	9		2						11	
09:30	10		10						20		**21:30**	2		0						2	
09:45	12	36	11	50					23	86	**21:45**	4	20	2	9					6	29
10:00	10		21						31		**22:00**	4		0						4	
10:15	5		8						13		**22:15**	2		3						5	
10:30	7		17						24		**22:30**	3		1						4	
10:45	14	36	10	56					24	92	**22:45**	2	11	0	4					2	15
11:00	7		12						19		**23:00**	0		1						1	
11:15	7		20						27		**23:15**	2		0						2	
11:30	18		14						32		**23:30**	0		0						0	
11:45	9	41	13	59					22	100	**23:45**	2	4	0	1					2	5
TOTALS		189		359						**548**	**TOTALS**		498		354						**852**
SPLIT %		34.5%		65.5%						**39.1%**	**SPLIT %**		58.5%		41.5%						**60.9%**

DAILY TOTALS	NB	SB	EB	WB	Total
	687	713	0	0	1,400

AM Peak Hour	11:30	07:15			**07:15**	**PM Peak Hour**	17:00	12:30			**16:45**
AM Pk Volume	48	100			**129**	**PM Pk Volume**	74	53			**121**
Pk Hr Factor	0.667	0.781			**0.849**	**Pk Hr Factor**	0.804	0.883			**0.917**
7 - 9 Volume	58	144	0	0	**202**	**4 - 6 Volume**	140	96	0	0	**236**
7 - 9 Peak Hour	08:00	07:15			**07:15**	**4 - 6 Peak Hour**	17:00	16:00			**16:45**
7 - 9 Pk Volume	31	100	0	0	**129**	**4 - 6 Pk Volume**	74	49	0	0	**121**
Pk Hr Factor	0.705	0.781	0.000	0.000	**0.849**	**Pk Hr Factor**	0.804	0.875	0.000	0.000	**0.917**

Prepared by NDS/ATD

VOLUME

Lone Star Rd W/O SR 49

Day: Saturday
Date: 6/10/2017

City: Auburn
Project #: CA17_7498_013

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,223	0	1,223

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			3		0		3		12:00			13		0		13	
00:15			2		0		2		12:15			11		0		11	
00:30			1		0		1		12:30			17		0		17	
00:45			3	9	0		3	9	12:45			19	60	0		19	60
01:00			0		0		0		13:00			20		0		20	
01:15			4		0		4		13:15			18		0		18	
01:30			0		0		0		13:30			19		0		19	
01:45			0	4	0		0	4	13:45			22	79	0		22	79
02:00			1		0		1		14:00			16		0		16	
02:15			0		0		0		14:15			21		0		21	
02:30			0		0		0		14:30			21		0		21	
02:45			3	4	0		3	4	14:45			19	77	0		19	77
03:00			0		0		0		15:00			17		0		17	
03:15			0		0		0		15:15			19		0		19	
03:30			1		0		1		15:30			28		0		28	
03:45			1	2	0		1	2	15:45			29	93	0		29	93
04:00			1		0		1		16:00			24		0		24	
04:15			0		0		0		16:15			38		0		38	
04:30			1		0		1		16:30			33		0		33	
04:45			1	3	0		1	3	16:45			32	127	0		32	127
05:00			1		0		1		17:00			24		0		24	
05:15			2		0		2		17:15			19		0		19	
05:30			2		0		2		17:30			21		0		21	
05:45			7	12	0		7	12	17:45			25	89	0		25	89
06:00			7		0		7		18:00			14		0		14	
06:15			4		0		4		18:15			16		0		16	
06:30			3		0		3		18:30			13		0		13	
06:45			19	33	0		19	33	18:45			10	53	0		10	53
07:00			13		0		13		19:00			11		0		11	
07:15			18		0		18		19:15			22		0		22	
07:30			19		0		19		19:30			14		0		14	
07:45			14	64	0		14	64	19:45			11	58	0		11	58
08:00			17		0		17		20:00			17		0		17	
08:15			25		0		25		20:15			8		0		8	
08:30			20		0		20		20:30			14		0		14	
08:45			10	72	0		10	72	20:45			13	52	0		13	52
09:00			24		0		24		21:00			2		0		2	
09:15			11		0		11		21:15			11		0		11	
09:30			20		0		20		21:30			7		0		7	
09:45			15	70	0		15	70	21:45			11	31	0		11	31
10:00			24		0		24		22:00			12		0		12	
10:15			12		0		12		22:15			19		0		19	
10:30			21		0		21		22:30			9		0		9	
10:45			21	78	0		21	78	22:45			13	53	0		13	53
11:00			18		0		18		23:00			10		0		10	
11:15			21		0		21		23:15			5		0		5	
11:30			21		0		21		23:30			4		0		4	
11:45			17	77	0		17	77	23:45			4	23	0		4	23
TOTALS			428				428		TOTALS			795				795	
SPLIT %			100.0%				35.0%		SPLIT %			100.0%				65.0%	

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,223	0	1,223

AM Peak Hour			10:30				10:30		PM Peak Hour			16:00				16:00	
AM Pk Volume			81				81		PM Pk Volume			127				127	
Pk Hr Factor			0.964				0.964		Pk Hr Factor			0.836				0.836	
7 - 9 Volume	0	0	136		0		136		4 - 6 Volume	0	0	216		0		216	
7 - 9 Peak Hour			07:45				07:45		4 - 6 Peak Hour			16:00				16:00	
7 - 9 Pk Volume	0	0	76		0		76		4 - 6 Pk Volume	0	0	127		0		127	
Pk Hr Factor	0.000	0.000	0.760		0.000		0.760		Pk Hr Factor	0.000	0.000	0.836		0.000		0.836	

Prepared by NDS/ATD

VOLUME

Lone Star Rd W/O SR 49

Day: Tuesday
Date: 10/3/2017

City: Auburn
Project #: CA17_7775_013

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	648	680	1,328

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	0	0	12:00			11	8	19
00:15			0	0	0	12:15			10	13	23
00:30			0	1	1	12:30			14	12	26
00:45			0	0	1	12:45			6	5	11
01:00			0	0	0	13:00			12	12	24
01:15			0	0	0	13:15			7	17	24
01:30			0	0	0	13:30			12	14	26
01:45			0	0	0	13:45			14	15	29
02:00			0	0	0	14:00			20	10	30
02:15			0	0	0	14:15			14	10	24
02:30			1	0	1	14:30			15	8	23
02:45			0	0	1	14:45			12	17	29
03:00			0	0	0	15:00			21	11	32
03:15			1	0	1	15:15			10	13	23
03:30			0	0	0	15:30			20	16	36
03:45			1	0	2	15:45			16	12	28
04:00			1	0	1	16:00			11	11	22
04:15			1	1	2	16:15			11	6	17
04:30			1	0	1	16:30			12	10	22
04:45			1	0	5	16:45			13	10	23
05:00			1	0	1	17:00			11	15	26
05:15			4	0	4	17:15			10	14	24
05:30			4	4	8	17:30			12	12	24
05:45			3	6	22	17:45			14	10	24
06:00			7	5	12	18:00			10	14	24
06:15			6	6	12	18:15			8	16	24
06:30			6	5	11	18:30			8	11	19
06:45			6	10	51	18:45			11	8	19
07:00			15	8	23	19:00			5	5	10
07:15			14	16	30	19:15			6	10	16
07:30			15	11	26	19:30			5	6	11
07:45			13	15	107	19:45			6	5	11
08:00			15	12	27	20:00			3	7	10
08:15			16	7	23	20:15			1	9	10
08:30			11	9	20	20:30			4	4	8
08:45			13	12	95	20:45			1	5	6
09:00			10	14	24	21:00			0	3	3
09:15			9	14	23	21:15			0	2	2
09:30			6	13	19	21:30			2	3	5
09:45			10	14	90	21:45			1	1	2
10:00			8	12	20	22:00			0	3	3
10:15			9	11	20	22:15			0	0	0
10:30			19	16	35	22:30			0	2	2
10:45			9	9	93	22:45			1	2	3
11:00			12	14	26	23:00			0	3	3
11:15			9	15	24	23:15			0	0	0
11:30			7	7	14	23:30			0	0	0
11:45			4	13	81	23:45			0	0	3
TOTALS			268	280	548	TOTALS			380	400	780
SPLIT %			48.9%	51.1%	41.3%	SPLIT %			48.7%	51.3%	58.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	648	680	1,328

AM Peak Hour			07:30	09:00	07:15	PM Peak Hour			15:00	13:00	14:45
AM Pk Volume			59	55	111	PM Pk Volume			67	58	120
Pk Hr Factor			0.922	0.982	0.925	Pk Hr Factor			0.798	0.853	0.833
7 - 9 Volume	0	0	112	90	202	4 - 6 Volume	0	0	94	88	182
7 - 9 Peak Hour			07:30	07:15	07:15	4 - 6 Peak Hour			16:00	16:45	17:00
7 - 9 Pk Volume	0	0	59	54	111	4 - 6 Pk Volume	0	0	47	51	98
Pk Hr Factor	0.000	0.000	0.922	0.844	0.925	Pk Hr Factor	0.000	0.000	0.904	0.850	0.942

Prepared by NDS/ATD

VOLUME

Cramer Road Bet. Bell Rd & SR 49

Day: Saturday
Date: 6/10/2017

City: Auburn
Project #: CA17_7498_030

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	267	282	549

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			0		0		0		12:00			6		2		8	
00:15			1		3		4		12:15			3		6		9	
00:30			1		1		2		12:30			8		8		16	
00:45			0	2	0	4	0	6	12:45			2	19	7	23	9	42
01:00			0		0		0		13:00			4		6		10	
01:15			1		1		2		13:15			7		6		13	
01:30			0		0		0		13:30			2		6		8	
01:45			0	1	0	1	0	2	13:45			3	16	6	24	9	40
02:00			2		0		2		14:00			6		7		13	
02:15			0		1		1		14:15			7		7		14	
02:30			1		0		1		14:30			5		6		11	
02:45			0	3	0	1	0	4	14:45			6	24	7	27	13	51
03:00			0		2		2		15:00			12		6		18	
03:15			0		0		0		15:15			11		8		19	
03:30			0		1		1		15:30			5		11		16	
03:45			1	1	0	3	1	4	15:45			2	30	11	36	13	66
04:00			2		0		2		16:00			4		10		14	
04:15			0		1		1		16:15			4		6		10	
04:30			1		0		1		16:30			6		2		8	
04:45			0	3	0	1	0	4	16:45			6	20	7	25	13	45
05:00			1		0		1		17:00			2		5		7	
05:15			1		1		2		17:15			5		2		7	
05:30			2		1		3		17:30			3		3		6	
05:45			0	4	0	2	0	6	17:45			1	11	6	16	7	27
06:00			1		0		1		18:00			2		2		4	
06:15			3		1		4		18:15			1		2		3	
06:30			0		2		2		18:30			1		6		7	
06:45			2	6	0	3	2	9	18:45			1	5	1	11	2	16
07:00			5		1		6		19:00			3		1		4	
07:15			3		3		6		19:15			2		2		4	
07:30			2		3		5		19:30			1		1		2	
07:45			5	15	2	9	7	24	19:45			3	9	2	6	5	15
08:00			3		3		6		20:00			1		5		6	
08:15			3		2		5		20:15			2		1		3	
08:30			8		4		12		20:30			4		3		7	
08:45			1	15	4	13	5	28	20:45			5	12	1	10	6	22
09:00			6		2		8		21:00			3		2		5	
09:15			4		4		8		21:15			1		1		2	
09:30			5		5		10		21:30			2		3		5	
09:45			3	18	4	15	7	33	21:45			2	8	3	9	5	17
10:00			5		8		13		22:00			4		2		6	
10:15			2		2		4		22:15			2		2		4	
10:30			4		4		8		22:30			1		3		4	
10:45			4	15	4	18	8	33	22:45			2	9	1	8	3	17
11:00			2		2		4		23:00			2		1		3	
11:15			6		4		10		23:15			1		2		3	
11:30			4		2		6		23:30			1		1		2	
11:45			5	17	4	12	9	29	23:45			0	4	1	5	1	9
TOTALS				100		82		182	TOTALS				167		200		367
SPLIT %				54.9%		45.1%		33.2%	SPLIT %				45.5%		54.5%		66.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	267	282	549

AM Peak Hour				11:45		09:15		11:45	PM Peak Hour				14:30		15:15		14:45
AM Pk Volume				22		21		42	PM Pk Volume				34		40		66
Pk Hr Factor				0.688		0.656		0.656	Pk Hr Factor				0.708		0.909		0.868
7 - 9 Volume	0	0		30		22		52	4 - 6 Volume	0	0		31		41		72
7 - 9 Peak Hour				07:45		08:00		07:45	4 - 6 Peak Hour				16:00		16:00		16:00
7 - 9 Pk Volume	0	0		19		13		30	4 - 6 Pk Volume	0	0		20		25		45
Pk Hr Factor	0.000	0.000		0.594		0.813		0.625	Pk Hr Factor	0.000	0.000		0.833		0.625		0.804

Prepared by NDS/ATD

VOLUME

Cramer Rd Bet. Bell Rd & SR 49

Day: Tuesday
Date: 10/3/2017

City: Auburn
Project #: CA17_7775_030

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	280	278	558

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00					0		0		0		12:00					5		6		11	
00:15					0		0		0		12:15					3		6		9	
00:30					0		0		0		12:30					5		7		12	
00:45					0		0		0		12:45					1	14	3	22	4	36
01:00					0		1		1		13:00					2		5		7	
01:15					0		0		0		13:15					5		3		8	
01:30					0		1		1		13:30					8		4		12	
01:45					0		0	2	0	2	13:45					6	21	4	16	10	37
02:00					0		0		0		14:00					5		4		9	
02:15					0		1		1		14:15					2		1		3	
02:30					0		1		1		14:30					3		3		6	
02:45					1	1	1	3	2	4	14:45					4	14	3	11	7	25
03:00					0		0		0		15:00					8		7		15	
03:15					0		0		0		15:15					10		2		12	
03:30					1		1		2		15:30					7		5		12	
03:45					0	1	0	1	0	2	15:45					5	30	9	23	14	53
04:00					1		0		1		16:00					8		8		16	
04:15					0		0		0		16:15					7		2		9	
04:30					1		0		1		16:30					5		4		9	
04:45					3	5	1	1	4	6	16:45					3	23	3	17	6	40
05:00					3		0		3		17:00					3		10		13	
05:15					2		1		3		17:15					8		8		16	
05:30					3		0		3		17:30					7		9		16	
05:45					3	11	0	1	3	12	17:45					2	20	9	36	11	56
06:00					6		1		7		18:00					1		7		8	
06:15					4		1		5		18:15					4		6		10	
06:30					4		3		7		18:30					2		5		7	
06:45					1	15	2	7	3	22	18:45					5	12	5	23	10	35
07:00					3		6		9		19:00					3		7		10	
07:15					4		3		7		19:15					1		6		7	
07:30					8		1		9		19:30					4		7		11	
07:45					0	15	3	13	3	28	19:45					3	11	2	22	5	33
08:00					3		4		7		20:00					1		3		4	
08:15					7		3		10		20:15					0		5		5	
08:30					6		2		8		20:30					0		3		3	
08:45					7	23	1	10	8	33	20:45					1	2	4	15	5	17
09:00					7		8		15		21:00					1		1		2	
09:15					3		2		5		21:15					0		1		1	
09:30					9		4		13		21:30					3		2		5	
09:45					7	26	2	16	9	42	21:45					2	6	1	5	3	11
10:00					5		1		6		22:00					0		1		1	
10:15					2		4		6		22:15					0		2		2	
10:30					1		3		4		22:30					0		1		1	
10:45					2	10	4	12	6	22	22:45					1	1	0	4	1	5
11:00					3		3		6		23:00					1		1		2	
11:15					4		3		7		23:15					1		1		2	
11:30					6		7		13		23:30					0		1		1	
11:45					4	17	2	15	6	32	23:45					0	2	0	3	0	5
TOTALS					124		81		205		TOTALS					156		197		353	
SPLIT %					60.5%		39.5%		36.7%		SPLIT %					44.2%		55.8%		63.3%	

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	280	278	558

AM Peak Hour			08:15	11:30	09:00	PM Peak Hour			15:00	17:00	17:00
AM Pk Volume			27	21	42	PM Pk Volume			30	36	56
Pk Hr Factor			0.964	0.750	0.700	Pk Hr Factor			0.750	0.900	0.875
7 - 9 Volume	0	0	38	23	61	4 - 6 Volume	0	0	43	53	96
7 - 9 Peak Hour			08:00	07:00	08:00	4 - 6 Peak Hour			16:00	17:00	17:00
7 - 9 Pk Volume	0	0	23	13	33	4 - 6 Pk Volume	0	0	23	36	56
Pk Hr Factor	0.000	0.000	0.821	0.542	0.825	Pk Hr Factor	0.000	0.000	0.719	0.900	0.875

Prepared by NDS/ATD

VOLUME

Auburn Valley Rd Bet. Bell Rd & View Ridge Dr

Day: Saturday
Date: 10/8/2016

City: Auburn
Project #: CA16_7715_013

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	451	433	884

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			0		1		1		12:00			4		7		11	
00:15			2		1		3		12:15			6		7		13	
00:30			2		1		3		12:30			15		6		21	
00:45			0	4	0	3	0	7	12:45			10	35	6	26	16	61
01:00			0		0		0		13:00			3		0		3	
01:15			0		0		0		13:15			8		14		22	
01:30			0		1		1		13:30			10		11		21	
01:45			1	1	0	1	1	2	13:45			4	25	9	34	13	59
02:00			0		2		2		14:00			8		8		16	
02:15			1		0		1		14:15			7		7		14	
02:30			1		0		1		14:30			3		7		10	
02:45			0	2	0	2	0	4	14:45			7	25	11	33	18	58
03:00			1		0		1		15:00			7		6		13	
03:15			1		1		2		15:15			19		4		23	
03:30			0		0		0		15:30			19		8		27	
03:45			0	2	0	1	0	3	15:45			14	59	9	27	23	86
04:00			0		0		0		16:00			4		11		15	
04:15			0		1		1		16:15			8		10		18	
04:30			0		0		0		16:30			7		12		19	
04:45			3	3	2	3	5	6	16:45			11	30	19	52	30	82
05:00			0		1		1		17:00			13		6		19	
05:15			0		0		0		17:15			4		9		13	
05:30			0		1		1		17:30			3		4		7	
05:45			1	1	5	7	6	8	17:45			12	32	4	23	16	55
06:00			1		1		2		18:00			5		10		15	
06:15			2		0		2		18:15			11		8		19	
06:30			1		3		4		18:30			6		1		7	
06:45			4	8	3	7	7	15	18:45			8	30	2	21	10	51
07:00			2		8		10		19:00			7		4		11	
07:15			2		14		16		19:15			4		0		4	
07:30			8		19		27		19:30			1		4		5	
07:45			3	15	18	59	21	74	19:45			7	19	6	14	13	33
08:00			4		5		9		20:00			8		5		13	
08:15			4		2		6		20:15			4		4		8	
08:30			8		4		12		20:30			5		3		8	
08:45			7	23	1	12	8	35	20:45			4	21	3	15	7	36
09:00			7		7		14		21:00			2		0		2	
09:15			7		5		12		21:15			4		2		6	
09:30			5		4		9		21:30			8		6		14	
09:45			4	23	4	20	8	43	21:45			6	20	2	10	8	30
10:00			5		1		6		22:00			2		3		5	
10:15			8		4		12		22:15			6		3		9	
10:30			10		4		14		22:30			2		1		3	
10:45			5	28	7	16	12	44	22:45			1	11	0	7	1	18
11:00			7		8		15		23:00			2		1		3	
11:15			5		8		13		23:15			0		1		1	
11:30			9		7		16		23:30			1		1		2	
11:45			10	31	14	37	24	68	23:45			0	3	0	3	0	6
TOTALS				141		168		309	TOTALS				310		265		575
SPLIT %				45.6%		54.4%		35.0%	SPLIT %				53.9%		46.1%		65.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	451	433	884

AM Peak Hour				11:45	07:00	07:00	PM Peak Hour				15:00	16:00	15:15
AM Pk Volume				35	59	74	PM Pk Volume				59	52	88
Pk Hr Factor				0.583	0.776	0.685	Pk Hr Factor				0.776	0.684	0.815
7 - 9 Volume	0	0		38	71	109	4 - 6 Volume	0	0		62	75	137
7 - 9 Peak Hour				08:00	07:00	07:00	4 - 6 Peak Hour				16:15	16:00	16:15
7 - 9 Pk Volume	0	0		23	59	74	4 - 6 Pk Volume	0	0		39	52	86
Pk Hr Factor	0.000	0.000		0.719	0.776	0.685	Pk Hr Factor	0.000	0.000		0.750	0.684	0.717

Prepared by NDS/ATD

VOLUME

Auburn Valley Rd Bet. View Ridge Dr & Bell Rd

Day: Friday
Date: 12/7/2018

City: Auburn
Project #: CA18_7414_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	461	474	935

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			0		0		0		12:00			6		7		13	
00:15			0		0		0		12:15			6		10		16	
00:30			0		1		1		12:30			13		8		21	
00:45			0		2	3	2	3	12:45			9	34	3	28	12	62
01:00			1		0		1		13:00			8		6		14	
01:15			0		0		0		13:15			6		8		14	
01:30			0		0		0		13:30			10		6		16	
01:45			0	1	0		0	1	13:45			6	30	9	29	15	59
02:00			0		0		0		14:00			7		6		13	
02:15			0		0		0		14:15			9		9		18	
02:30			0		1		1		14:30			16		6		22	
02:45			0		1	2	1	2	14:45			14	46	9	30	23	76
03:00			0		1		1		15:00			17		7		24	
03:15			0		0		0		15:15			17		15		32	
03:30			0		0		0		15:30			8		4		12	
03:45			2	2	0	1	2	3	15:45			11	53	7	33	18	86
04:00			0		0		0		16:00			10		13		23	
04:15			0		0		0		16:15			21		6		27	
04:30			0		0		0		16:30			8		11		19	
04:45			1	1	1	1	2	2	16:45			10	49	10	40	20	89
05:00			1		0		1		17:00			7		4		11	
05:15			1		1		2		17:15			5		7		12	
05:30			0		1		1		17:30			6		6		12	
05:45			4	6	6	8	10	14	17:45			4	22	3	20	7	42
06:00			1		1		2		18:00			4		9		13	
06:15			4		1		5		18:15			2		7		9	
06:30			2		2		4		18:30			2		9		11	
06:45			4	11	0	4	4	15	18:45			5	13	3	28	8	41
07:00			5		2		7		19:00			1		2		3	
07:15			7		5		12		19:15			3		5		8	
07:30			11		6		17		19:30			0		4		4	
07:45			11	34	11	24	22	58	19:45			1	5	4	15	5	20
08:00			11		17		28		20:00			0		6		6	
08:15			9		8		17		20:15			1		2		3	
08:30			11		14		25		20:30			1		5		6	
08:45			6	37	8	47	14	84	20:45			1	3	3	16	4	19
09:00			11		14		25		21:00			2		3		5	
09:15			7		9		16		21:15			2		0		2	
09:30			6		14		20		21:30			0		1		1	
09:45			9	33	12	49	21	82	21:45			1	5	3	7	4	12
10:00			10		10		20		22:00			1		4		5	
10:15			7		14		21		22:15			0		0		0	
10:30			8		12		20		22:30			1		4		5	
10:45			5	30	9	45	14	75	22:45			2	4	2	10	4	14
11:00			4		6		10		23:00			0		0		0	
11:15			11		7		18		23:15			0		0		0	
11:30			13		13		26		23:30			0		2		2	
11:45			12	40	6	32	18	72	23:45			2	2	0	2	2	4
TOTALS			195		216		411		TOTALS			266		258		524	
SPLIT %			47.4%		52.6%		44.0%		SPLIT %			50.8%		49.2%		56.0%	

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	461	474	935

AM Peak Hour			07:30		07:45		07:45		PM Peak Hour			14:30		16:00		14:30	
AM Pk Volume			42		50		92		PM Pk Volume			64		40		101	
Pk Hr Factor			0.955		0.735		0.821		Pk Hr Factor			0.941		0.769		0.789	
7 - 9 Volume	0	0	71		71		142		4 - 6 Volume	0	0	71		60		131	
7 - 9 Peak Hour			07:30		07:45		07:45		4 - 6 Peak Hour			16:00		16:00		16:00	
7 - 9 Pk Volume	0	0	42		50		92		4 - 6 Pk Volume	0	0	49		40		89	
Pk Hr Factor	0.000	0.000	0.955		0.735		0.821		Pk Hr Factor	0.000	0.000	0.583		0.769		0.824	

Prepared by NDS/ATD

VOLUME

Auburn Valley Rd Bet. Fairway Ct & Curtola Ranch Rd

Day: Saturday
Date: 10/8/2016

City: Auburn
Project #: CA16_7715_014

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	161	238	399

AM Period	NB		SB		EB		WB		TOTAL	
00:00					0		0		0	
00:15					1		0		1	
00:30					2		0		2	
00:45					0	3	0		0	3
01:00					0		0		0	
01:15					0		0		0	
01:30					0		0		0	
01:45					0		0		0	
02:00					0		0		0	
02:15					1		1		2	
02:30					0		0		0	
02:45					0	1	0	1	0	2
03:00					0		0		0	
03:15					0		0		0	
03:30					0		0		0	
03:45					0		0		0	
04:00					0		0		0	
04:15					0		1		1	
04:30					0		0		0	
04:45					0		2	3	2	3
05:00					0		0		0	
05:15					0		0		0	
05:30					0		1		1	
05:45					0		3	4	3	4
06:00					1		3		4	
06:15					0		0		0	
06:30					0		2		2	
06:45					0	1	3	8	3	9
07:00					0		7		7	
07:15					1		10		11	
07:30					0		18		18	
07:45					0	1	21	56	21	57
08:00					0		2		2	
08:15					0		2		2	
08:30					0		1		1	
08:45					2	2	11	16	13	18
09:00					1		6		7	
09:15					1		5		6	
09:30					0		2		2	
09:45					2	4	1	14	3	18
10:00					3		3		6	
10:15					3		2		5	
10:30					2		2		4	
10:45					1	9	2	9	3	18
11:00					0		2		2	
11:15					1		6		7	
11:30					3		4		7	
11:45					3	7	6	18	9	25
TOTALS					28		129		157	
SPLIT %					17.8%		82.2%		39.3%	

PM Period	NB		SB		EB		WB		TOTAL	
12:00					0		3		3	
12:15					2		8		10	
12:30					5		4		9	
12:45					2	9	5	20	7	29
13:00					2		4		6	
13:15					0		7		7	
13:30					3		5		8	
13:45					2	7	3	19	5	26
14:00					1		2		3	
14:15					4		3		7	
14:30					3		4		7	
14:45					3	11	3	12	6	23
15:00					4		4		8	
15:15					14		1		15	
15:30					12		2		14	
15:45					5	35	2	9	7	44
16:00					2		4		6	
16:15					4		2		6	
16:30					3		8		11	
16:45					4	13	13	27	17	40
17:00					4		2		6	
17:15					2		5		7	
17:30					0		1		1	
17:45					9	15	3	11	12	26
18:00					3		1		4	
18:15					3		1		4	
18:30					4		0		4	
18:45					5	15	0	2	5	17
19:00					2		0		2	
19:15					2		0		2	
19:30					0		0		0	
19:45					0	4	0		0	4
20:00					2		0		2	
20:15					2		1		3	
20:30					1		0		1	
20:45					0	5	2	3	2	8
21:00					1		0		1	
21:15					3		1		4	
21:30					4		2		6	
21:45					2	10	0	3	2	13
22:00					1		1		2	
22:15					3		0		3	
22:30					3		0		3	
22:45					2	9	2	3	4	12
23:00					0		0		0	
23:15					0		0		0	
23:30					0		0		0	
23:45					0		0		0	
TOTALS					133		109		242	
SPLIT %					55.0%		45.0%		60.7%	

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	161	238	399

AM Peak Hour			09:45	07:00	07:00
AM Pk Volume			10	56	57
Pk Hr Factor			0.833	0.667	0.679
7 - 9 Volume	0	0	3	72	75
7 - 9 Peak Hour			08:00	07:00	07:00
7 - 9 Pk Volume	0	0	2	56	57
Pk Hr Factor	0.000	0.000	0.250	0.667	0.679

PM Peak Hour			15:00	16:30	15:00
PM Pk Volume			35	28	44
Pk Hr Factor			0.625	0.538	0.733
4 - 6 Volume	0	0	28	38	66
4 - 6 Peak Hour			16:15	16:30	16:30
4 - 6 Pk Volume	0	0	15	28	41
Pk Hr Factor	0.000	0.000	0.938	0.538	0.603

Prepared by NDS/ATD

VOLUME

Auburn Valley Rd Bet. Curtola Ranch Rd & Fairway Ct

Day: Friday
Date: 12/7/2018

City: Auburn
Project #: CA18_7414_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	147	148	295

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	0	0	12:00			1	3	4
00:15			0	0	0	12:15			3	1	4
00:30			0	0	0	12:30			1	2	3
00:45			0	0	0	12:45			6	11	1	7	7	18
01:00			0	0	0	13:00			3	1	4
01:15			0	0	0	13:15			1	2	3
01:30			0	0	0	13:30			6	4	10
01:45			0	0	0	13:45			3	13	1	8	4	21
02:00			0	0	0	14:00			2	4	6
02:15			0	0	0	14:15			7	0	7
02:30			0	0	0	14:30			8	2	10
02:45			0	0	0	14:45			12	29	3	9	15	38
03:00			0	0	0	15:00			12	3	15
03:15			0	0	0	15:15			9	4	13
03:30			0	0	0	15:30			1	3	4
03:45			0	0	0	15:45			4	26	1	11	5	37
04:00			0	0	0	16:00			8	5	13
04:15			0	0	0	16:15			10	0	10
04:30			0	0	0	16:30			3	2	5
04:45			0	1	1	1	16:45			7	28	1	8	8	36
05:00			0	0	0	17:00			0	1	1
05:15			0	0	0	17:15			0	0	0
05:30			0	1	1	17:30			3	1	4
05:45			0	5	6	5	6	17:45			2	5	0	2	2	7
06:00			0	1	1	18:00			1	0	1
06:15			1	0	1	18:15			2	1	3
06:30			0	2	2	18:30			0	0	0
06:45		1	0	3	0	4	18:45			1	4	0	1	1	5
07:00			1	3	4	19:00			0	0	0
07:15			1	3	4	19:15			0	0	0
07:30			1	4	5	19:30			0	2	2
07:45		4	1	5	15	6	19	19:45			0	0	2	0	2
08:00			2	8	10	20:00			0	0	0
08:15			0	6	6	20:15			0	2	2
08:30			1	4	5	20:30			0	0	0
08:45		3	0	2	20	2	23	20:45			0	0	2	0	2
09:00			1	3	4	21:00			2	1	3
09:15			3	7	10	21:15			1	0	1
09:30			1	5	6	21:30			1	0	1
09:45		6	1	10	25	11	31	21:45			0	4	0	1	0	5
10:00			2	3	5	22:00			0	0	0
10:15			0	5	5	22:15			0	0	0
10:30			2	6	8	22:30			2	1	3
10:45		6	2	1	15	3	21	22:45			0	2	0	1	0	3
11:00			1	1	2	23:00			0	0	0
11:15			0	1	1	23:15			0	0	0
11:30			0	6	6	23:30			0	0	0
11:45		5	4	3	11	7	16	23:45			0	0	0
TOTALS			25	96	121	TOTALS			122	52	174
SPLIT %			20.7%	79.3%	41.0%	SPLIT %			70.1%	29.9%	59.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	147	148	295

AM Peak Hour			11:45	09:00	09:15	PM Peak Hour			14:30	14:45	14:30
AM Pk Volume			9	25	32	PM Pk Volume			41	13	53
Pk Hr Factor			0.563	0.625	0.727	Pk Hr Factor			0.854	0.813	0.883
7 - 9 Volume	0	0	7	35	42	4 - 6 Volume	0	0	33	10	43
7 - 9 Peak Hour			07:15	07:30	07:30	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	5	23	27	4 - 6 Pk Volume	0	0	28	8	36
Pk Hr Factor	0.000	0.000	0.625	0.719	0.675	Pk Hr Factor	0.000	0.000	0.700	0.400	0.692

LEVEL OF SERVICE CALCULATIONS

KDA

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1	40	39	1	12	24	899	20	5	1296	10
Future Vol, veh/h	3	1	40	39	1	12	24	899	20	5	1296	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	60	-	-	60	300	-	200	300	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	6	2	2	6	2
Mvmt Flow	3	1	43	42	1	13	26	967	22	5	1394	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1940	2445	697	1727	2434	484	1405	0	0	989	0	0
Stage 1	1404	1404	-	1019	1019	-	-	-	-	-	-	-
Stage 2	536	1041	-	708	1415	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	39	31	383	57	31	529	482	-	-	695	-	-
Stage 1	147	204	-	254	313	-	-	-	-	-	-	-
Stage 2	496	305	-	392	202	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	35	29	383	47	29	529	482	-	-	695	-	-
Mov Cap-2 Maneuver	35	29	-	47	29	-	-	-	-	-	-	-
Stage 1	139	203	-	240	296	-	-	-	-	-	-	-
Stage 2	456	289	-	344	201	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26	195.6	0.3	0
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	482	-	-	33	383	46	529	695	-	-
HCM Lane V/C Ratio	0.054	-	-	0.13	0.112	0.935	0.024	0.008	-	-
HCM Control Delay (s)	12.9	-	-	129.8	15.6	250.7	12	10.2	-	-
HCM Lane LOS	B	-	-	F	C	F	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.4	0.4	3.8	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	19	25	1301	1171	9
Future Vol, veh/h	1	19	25	1301	1171	9
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	-	500	-	-	320
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	20	26	1369	1233	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1970	617	1242	0	-	0
Stage 1	1233	-	-	-	-	-
Stage 2	737	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	55	433	556	-	-	-
Stage 1	238	-	-	-	-	-
Stage 2	434	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	52	433	556	-	-	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	227	-	-	-	-	-
Stage 2	434	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.6	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	556	-	397	-	-
HCM Lane V/C Ratio	0.047	-	0.053	-	-
HCM Control Delay (s)	11.8	-	14.6	-	-
HCM Lane LOS	B	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	2	13	5	6	26
Future Vol, veh/h	17	2	13	5	6	26
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	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	3	18	7	8	36

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	69	26	44	0	-	0
Stage 1	26	-	-	-	-	-
Stage 2	43	-	-	-	-	-
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	936	1050	1564	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	925	1050	1564	-	-	-
Mov Cap-2 Maneuver	925	-	-	-	-	-
Stage 1	985	-	-	-	-	-
Stage 2	979	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	5.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1564	-	937	-	-
HCM Lane V/C Ratio	0.011	-	0.028	-	-
HCM Control Delay (s)	7.3	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	46	57	11	23	2
Future Vol, veh/h	3	46	57	11	23	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	57	70	14	28	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	84	0	-	0	142	77
Stage 1	-	-	-	-	77	-
Stage 2	-	-	-	-	65	-
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	1513	-	-	-	851	984
Stage 1	-	-	-	-	946	-
Stage 2	-	-	-	-	958	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1513	-	-	-	848	984
Mov Cap-2 Maneuver	-	-	-	-	848	-
Stage 1	-	-	-	-	943	-
Stage 2	-	-	-	-	958	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1513	-	-	-	857
HCM Lane V/C Ratio	0.002	-	-	-	0.036
HCM Control Delay (s)	7.4	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	10	13	11	9	13
Future Vol, veh/h	18	10	13	11	9	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	14	18	15	13	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	33	0	-	0	90	26
Stage 1	-	-	-	-	26	-
Stage 2	-	-	-	-	64	-
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	1579	-	-	-	910	1050
Stage 1	-	-	-	-	997	-
Stage 2	-	-	-	-	959	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1579	-	-	-	895	1050
Mov Cap-2 Maneuver	-	-	-	-	895	-
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	959	-

Approach	EB	WB	SB
HCM Control Delay, s	4.7	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1579	-	-	-	981
HCM Lane V/C Ratio	0.016	-	-	-	0.032
HCM Control Delay (s)	7.3	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	0	39	19	0	6	44	1778	53	6	1182	13
Future Vol, veh/h	15	0	39	19	0	6	44	1778	53	6	1182	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	60	-	-	60	300	-	200	300	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	6	2	2	6	2
Mvmt Flow	15	0	40	19	0	6	45	1814	54	6	1206	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2215	3176	603	2519	3135	907	1219	0	0	1868	0	0
Stage 1	1218	1218	-	1904	1904	-	-	-	-	-	-	-
Stage 2	997	1958	-	615	1231	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	24	10	442	~ 14	11	279	568	-	-	319	-	-
Stage 1	191	251	-	71	115	-	-	-	-	-	-	-
Stage 2	262	108	-	445	248	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	22	9	442	~ 12	10	279	568	-	-	319	-	-
Mov Cap-2 Maneuver	22	9	-	~ 12	10	-	-	-	-	-	-	-
Stage 1	176	246	-	65	106	-	-	-	-	-	-	-
Stage 2	236	99	-	397	243	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	103.5	$ 711.7	0.3	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	568	-	-	22	442	12	279	319	-	-
HCM Lane V/C Ratio	0.079	-	-	0.696	0.09	1.616	0.022	0.019	-	-
HCM Control Delay (s)	11.9	-	-	$ 336.6	13.9	$ 930.7	18.2	16.5	-	-
HCM Lane LOS	B	-	-	F	B	F	C	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-	2	0.3	3.2	0.1	0.1	-	-

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

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	19	20	1621	1153	8
Future Vol, veh/h	8	19	20	1621	1153	8
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	-	500	-	-	320
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	19	20	1637	1165	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2024	583	1173	0	-	0
Stage 1	1165	-	-	-	-	-
Stage 2	859	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	50	456	591	-	-	-
Stage 1	259	-	-	-	-	-
Stage 2	375	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	48	456	591	-	-	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	250	-	-	-	-	-
Stage 2	375	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.8	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	591	-	289	-	-
HCM Lane V/C Ratio	0.034	-	0.094	-	-
HCM Control Delay (s)	11.3	-	18.8	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	12	9	9	8	22
Future Vol, veh/h	25	12	9	9	8	22
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	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	12	9	9	8	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	47	20	31	0	-	0
Stage 1	20	-	-	-	-	-
Stage 2	27	-	-	-	-	-
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	963	1058	1582	-	-	-
Stage 1	1003	-	-	-	-	-
Stage 2	996	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	957	1058	1582	-	-	-
Mov Cap-2 Maneuver	957	-	-	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	996	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	3.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1582	-	988	-	-
HCM Lane V/C Ratio	0.006	-	0.039	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	86	102	7	20	5
Future Vol, veh/h	4	86	102	7	20	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	101	120	8	24	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	128	0	-	0	235	124
Stage 1	-	-	-	-	124	-
Stage 2	-	-	-	-	111	-
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	1458	-	-	-	753	927
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	914	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1458	-	-	-	750	927
Mov Cap-2 Maneuver	-	-	-	-	750	-
Stage 1	-	-	-	-	898	-
Stage 2	-	-	-	-	914	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1458	-	-	-	780
HCM Lane V/C Ratio	0.003	-	-	-	0.038
HCM Control Delay (s)	7.5	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	8	15	9	5	10
Future Vol, veh/h	9	8	15	9	5	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	9	16	10	5	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	26	0	-	0	50	21
Stage 1	-	-	-	-	21	-
Stage 2	-	-	-	-	29	-
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	1588	-	-	-	959	1056
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	994	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1588	-	-	-	953	1056
Mov Cap-2 Maneuver	-	-	-	-	953	-
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	994	-

Approach	EB	WB	SB
HCM Control Delay, s	3.9	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1588	-	-	-	1019
HCM Lane V/C Ratio	0.006	-	-	-	0.016
HCM Control Delay (s)	7.3	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	1	77	39	1	12	44	908	20	5	1301	12
Future Vol, veh/h	7	1	77	39	1	12	44	908	20	5	1301	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	60	-	-	60	300	-	200	300	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	6	2	2	6	2
Mvmt Flow	8	1	83	42	1	13	47	976	22	5	1399	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1992	2501	700	1780	2492	488	1412	0	0	998	0	0
Stage 1	1409	1409	-	1070	1070	-	-	-	-	-	-	-
Stage 2	583	1092	-	710	1422	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	36	28	382	52	29	526	479	-	-	689	-	-
Stage 1	146	203	-	236	296	-	-	-	-	-	-	-
Stage 2	465	289	-	391	200	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	31	25	382	~ 36	26	526	479	-	-	689	-	-
Mov Cap-2 Maneuver	31	25	-	~ 36	26	-	-	-	-	-	-	-
Stage 1	132	202	-	213	267	-	-	-	-	-	-	-
Stage 2	407	261	-	302	199	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	31.2	298.8	0.6	0
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	479	-	-	30	382	36	526	689	-	-
HCM Lane V/C Ratio	0.099	-	-	0.287	0.217	1.195	0.025	0.008	-	-
HCM Control Delay (s)	13.3	-	-	167.6	17$	384.8	12	10.3	-	-
HCM Lane LOS	B	-	-	F	C	F	B	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.9	0.8	4.5	0.1	0	-	-

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

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	42	38	1325	1210	12
Future Vol, veh/h	7	42	38	1325	1210	12
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	-	500	-	-	320
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	44	40	1395	1274	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2052	637	1287	0	-	0
Stage 1	1274	-	-	-	-	-
Stage 2	778	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	48	420	535	-	-	-
Stage 1	226	-	-	-	-	-
Stage 2	413	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	44	420	535	-	-	-
Mov Cap-2 Maneuver	144	-	-	-	-	-
Stage 1	209	-	-	-	-	-
Stage 2	413	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.9	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	535	-	330	-	-
HCM Lane V/C Ratio	0.075	-	0.156	-	-
HCM Control Delay (s)	12.3	-	17.9	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.5	-	-

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	58	4	14	4	6	49
Future Vol, veh/h	58	4	14	4	6	49
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	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	5	19	5	8	67

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	85	42	75	0	-	0
Stage 1	42	-	-	-	-	-
Stage 2	43	-	-	-	-	-
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	916	1029	1524	-	-	-
Stage 1	980	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	904	1029	1524	-	-	-
Mov Cap-2 Maneuver	904	-	-	-	-	-
Stage 1	967	-	-	-	-	-
Stage 2	979	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	5.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1524	-	911	-	-
HCM Lane V/C Ratio	0.013	-	0.093	-	-
HCM Control Delay (s)	7.4	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	50	66	13	25	8
Future Vol, veh/h	7	50	66	13	25	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	62	81	16	31	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	97	0	-	0	169	89
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	80	-
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	1496	-	-	-	821	969
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	943	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1496	-	-	-	816	969
Mov Cap-2 Maneuver	-	-	-	-	816	-
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	943	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1496	-	-	-	848
HCM Lane V/C Ratio	0.006	-	-	-	0.048
HCM Control Delay (s)	7.4	0	-	-	9.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	10	13	24	31	13
Future Vol, veh/h	18	10	13	24	31	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	14	18	34	44	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	52	0	-	0	99	35
Stage 1	-	-	-	-	35	-
Stage 2	-	-	-	-	64	-
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	1554	-	-	-	900	1038
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	959	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1554	-	-	-	886	1038
Mov Cap-2 Maneuver	-	-	-	-	886	-
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	959	-

Approach	EB	WB	SB
HCM Control Delay, s	4.7	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1554	-	-	-	926
HCM Lane V/C Ratio	0.016	-	-	-	0.067
HCM Control Delay (s)	7.4	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	24	21	12	72	54	13
Future Vol, veh/h	24	21	12	72	54	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	23	13	78	59	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	170	66	73	0	-	0
Stage 1	66	-	-	-	-	-
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	820	998	1527	-	-	-
Stage 1	957	-	-	-	-	-
Stage 2	920	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	813	998	1527	-	-	-
Mov Cap-2 Maneuver	813	-	-	-	-	-
Stage 1	948	-	-	-	-	-
Stage 2	920	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	1.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1527	-	890	-	-
HCM Lane V/C Ratio	0.009	-	0.055	-	-
HCM Control Delay (s)	7.4	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	9.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	0	55	19	0	6	50	1787	53	6	1186	15
Future Vol, veh/h	19	0	55	19	0	6	50	1787	53	6	1186	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	60	-	-	60	300	-	200	300	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	6	2	2	6	2
Mvmt Flow	19	0	56	19	0	6	51	1823	54	6	1210	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2236	3201	605	2542	3162	912	1225	0	0	1877	0	0
Stage 1	1222	1222	-	1925	1925	-	-	-	-	-	-	-
Stage 2	1014	1979	-	617	1237	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	23	10	441	~ 14	10	276	565	-	-	316	-	-
Stage 1	190	250	-	69	113	-	-	-	-	-	-	-
Stage 2	256	106	-	444	246	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	21	9	441	~ 11	9	276	565	-	-	316	-	-
Mov Cap-2 Maneuver	21	9	-	~ 11	9	-	-	-	-	-	-	-
Stage 1	173	245	-	63	103	-	-	-	-	-	-	-
Stage 2	228	96	-	380	241	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	120.2	$ 795.9	0.3	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	565	-	-	21	441	11	276	316	-	-
HCM Lane V/C Ratio	0.09	-	-	0.923	0.127	1.763	0.022	0.019	-	-
HCM Control Delay (s)	12	-	-	$ 426.6	14.4	$ 1041.4	18.3	16.6	-	-
HCM Lane LOS	B	-	-	F	B	F	C	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-	2.6	0.4	3.3	0.1	0.1	-	-

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

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	29	24	1631	1170	11
Future Vol, veh/h	13	29	24	1631	1170	11
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	-	500	-	-	320
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	29	24	1647	1182	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2054	591	1193	0	-	0
Stage 1	1182	-	-	-	-	-
Stage 2	872	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	48	450	581	-	-	-
Stage 1	254	-	-	-	-	-
Stage 2	369	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	46	450	581	-	-	-
Mov Cap-2 Maneuver	154	-	-	-	-	-
Stage 1	244	-	-	-	-	-
Stage 2	369	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	581	-	282	-	-
HCM Lane V/C Ratio	0.042	-	0.15	-	-
HCM Control Delay (s)	11.5	-	20	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	13	9	9	8	30
Future Vol, veh/h	45	13	9	9	8	30
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	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	13	9	9	8	31

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	51	24	39	0	-	0
Stage 1	24	-	-	-	-	-
Stage 2	27	-	-	-	-	-
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	958	1052	1571	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	996	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	952	1052	1571	-	-	-
Mov Cap-2 Maneuver	952	-	-	-	-	-
Stage 1	993	-	-	-	-	-
Stage 2	996	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	3.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1571	-	973	-	-
HCM Lane V/C Ratio	0.006	-	0.061	-	-
HCM Control Delay (s)	7.3	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	88	105	8	21	8
Future Vol, veh/h	5	88	105	8	21	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	104	124	9	25	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	133	0	-	0	245	129
Stage 1	-	-	-	-	129	-
Stage 2	-	-	-	-	116	-
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	1452	-	-	-	743	921
Stage 1	-	-	-	-	897	-
Stage 2	-	-	-	-	909	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1452	-	-	-	740	921
Mov Cap-2 Maneuver	-	-	-	-	740	-
Stage 1	-	-	-	-	893	-
Stage 2	-	-	-	-	909	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1452	-	-	-	782
HCM Lane V/C Ratio	0.004	-	-	-	0.044
HCM Control Delay (s)	7.5	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	8	15	13	16	10
Future Vol, veh/h	9	8	15	13	16	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	9	16	14	17	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	30	0	-	0	52	23
Stage 1	-	-	-	-	23	-
Stage 2	-	-	-	-	29	-
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	1583	-	-	-	957	1054
Stage 1	-	-	-	-	1000	-
Stage 2	-	-	-	-	994	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1583	-	-	-	951	1054
Mov Cap-2 Maneuver	-	-	-	-	951	-
Stage 1	-	-	-	-	994	-
Stage 2	-	-	-	-	994	-

Approach	EB	WB	SB
HCM Control Delay, s	3.9	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1583	-	-	-	988
HCM Lane V/C Ratio	0.006	-	-	-	0.028
HCM Control Delay (s)	7.3	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

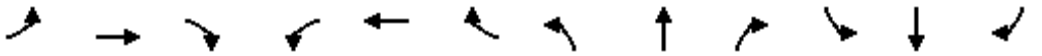
Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	9	3	77	49	5
Future Vol, veh/h	13	9	3	77	49	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	10	3	84	53	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	146	56	58	0	-	0
Stage 1	56	-	-	-	-	-
Stage 2	90	-	-	-	-	-
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	846	1011	1546	-	-	-
Stage 1	967	-	-	-	-	-
Stage 2	934	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	844	1011	1546	-	-	-
Mov Cap-2 Maneuver	844	-	-	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	934	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1546	-	905	-	-
HCM Lane V/C Ratio	0.002	-	0.026	-	-
HCM Control Delay (s)	7.3	0	9.1	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	1	60	58	1	18	36	1346	30	7	1976	18
Future Volume (vph)	4	1	60	58	1	18	36	1346	30	7	1976	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		60	0		60	300		200	300		200
Storage Lanes	0		1	0		1	1		2	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.962			0.953		0.950			0.950		
Satd. Flow (prot)	0	1792	1583	0	1775	1583	1770	3406	1583	1770	3406	1583
Flt Permitted		0.962			0.953		0.950			0.950		
Satd. Flow (perm)	0	1792	1583	0	1775	1583	1770	3406	1583	1770	3406	1583
Link Speed (mph)		30			30			55			55	
Link Distance (ft)		1456			1472			2369			1464	
Travel Time (s)		33.1			33.5			29.4			18.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	6%	2%	2%	6%	2%
Adj. Flow (vph)	4	1	65	62	1	19	39	1447	32	8	2125	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	5	65	0	63	19	39	1447	32	8	2125	19
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 71.7%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	93.9

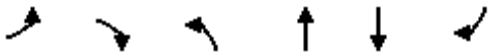
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1	60	58	1	18	36	1346	30	7	1976	18
Future Vol, veh/h	4	1	60	58	1	18	36	1346	30	7	1976	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	60	-	-	60	300	-	200	300	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	6	2	2	6	2
Mvmt Flow	4	1	65	62	1	19	39	1447	32	8	2125	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2943	3698	1063	2604	3685	724	2144	0	0	1479	0	0
Stage 1	2141	2141	-	1525	1525	-	-	-	-	-	-	-
Stage 2	802	1557	-	1079	2160	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	7	5	219	~ 12	5	368	248	-	-	451	-	-
Stage 1	50	87	-	123	178	-	-	-	-	-	-	-
Stage 2	344	172	-	233	85	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	5	4	219	~ 6	4	368	248	-	-	451	-	-
Mov Cap-2 Maneuver	5	4	-	~ 6	4	-	-	-	-	-	-	-
Stage 1	42	85	-	104	150	-	-	-	-	-	-	-
Stage 2	273	145	-	159	83	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	128.5	$ 4215.3	0.6	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	248	-	-	5	219	6	368	451	-	-
HCM Lane V/C Ratio	0.156	-	-	1.075	0.295	10.573	0.053	0.017	-	-
HCM Control Delay (s)	22.2	-	$	1332.4	28.2	$ 5496.7	15.3	13.1	-	-
HCM Lane LOS	C	-	-	F	D	F	C	B	-	-
HCM 95th %tile Q(veh)	0.5	-	-	1.4	1.2	9.6	0.2	0.1	-	-

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



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	32	80	1944	1787	16
Future Volume (vph)	1	32	80	1944	1787	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	500			320
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt	0.869					0.850
Flt Protected	0.999		0.950			
Satd. Flow (prot)	1617	0	1770	3539	3539	1583
Flt Permitted	0.999		0.950			
Satd. Flow (perm)	1617	0	1770	3539	3539	1583
Link Speed (mph)	30			30	30	
Link Distance (ft)	1287			1101	1293	
Travel Time (s)	29.3			25.0	29.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1	34	84	2046	1881	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	35	0	84	2046	1881	17
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 67.2%		ICU Level of Service C	
Analysis Period (min) 15			

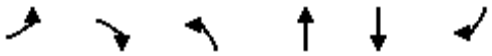
Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	32	80	1944	1787	16
Future Vol, veh/h	1	32	80	1944	1787	16
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	-	500	-	-	320
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	34	84	2046	1881	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3072	941	1898	0	-	0
Stage 1	1881	-	-	-	-	-
Stage 2	1191	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	9	264	310	-	-	-
Stage 1	106	-	-	-	-	-
Stage 2	251	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	7	264	310	-	-	-
Mov Cap-2 Maneuver	56	-	-	-	-	-
Stage 1	77	-	-	-	-	-
Stage 2	251	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.8	0.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	310	-	237	-	-
HCM Lane V/C Ratio	0.272	-	0.147	-	-
HCM Control Delay (s)	20.9	-	22.8	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	1.1	-	0.5	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	25	3	19	6	12	39
Future Volume (vph)	25	3	19	6	12	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.986				0.896	
Flt Protected	0.957			0.963		
Satd. Flow (prot)	1758	0	0	1794	1669	0
Flt Permitted	0.957			0.963		
Satd. Flow (perm)	1758	0	0	1794	1669	0
Link Speed (mph)	30			30	45	
Link Distance (ft)	1328			1761	1200	
Travel Time (s)	30.2			40.0	18.2	
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Adj. Flow (vph)	34	4	26	8	16	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	38	0	0	34	69	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.0%		ICU Level of Service A	
Analysis Period (min) 15			

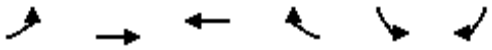
Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	3	19	6	12	39
Future Vol, veh/h	25	3	19	6	12	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	4	26	8	16	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	103	43	69	0	-	0
Stage 1	43	-	-	-	-	-
Stage 2	60	-	-	-	-	-
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	895	1027	1532	-	-	-
Stage 1	979	-	-	-	-	-
Stage 2	963	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	880	1027	1532	-	-	-
Mov Cap-2 Maneuver	880	-	-	-	-	-
Stage 1	962	-	-	-	-	-
Stage 2	963	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	5.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1532	-	894	-	-
HCM Lane V/C Ratio	0.017	-	0.043	-	-
HCM Control Delay (s)	7.4	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	80	125	16	34	3
Future Volume (vph)	4	80	125	16	34	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.984		0.988	
Flt Protected		0.998			0.956	
Satd. Flow (prot)	0	1859	1833	0	1759	0
Flt Permitted		0.998			0.956	
Satd. Flow (perm)	0	1859	1833	0	1759	0
Link Speed (mph)		30	45		45	
Link Distance (ft)		1569	1474		1072	
Travel Time (s)		35.7	22.3		16.2	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	5	99	154	20	42	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	104	174	0	46	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.5%		ICU Level of Service A	
Analysis Period (min) 15			

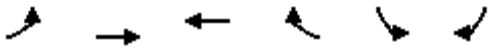
Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	80	125	16	34	3
Future Vol, veh/h	4	80	125	16	34	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	99	154	20	42	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	174	0	-	0	273	164
Stage 1	-	-	-	-	164	-
Stage 2	-	-	-	-	109	-
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	1403	-	-	-	716	881
Stage 1	-	-	-	-	865	-
Stage 2	-	-	-	-	916	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1403	-	-	-	713	881
Mov Cap-2 Maneuver	-	-	-	-	713	-
Stage 1	-	-	-	-	862	-
Stage 2	-	-	-	-	916	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1403	-	-	-	724
HCM Lane V/C Ratio	0.004	-	-	-	0.063
HCM Control Delay (s)	7.6	0	-	-	10.3
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	27	44	21	29	35	19
Future Volume (vph)	27	44	21	29	35	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.922		0.952	
Flt Protected		0.981			0.969	
Satd. Flow (prot)	0	1827	1717	0	1718	0
Flt Permitted		0.981			0.969	
Satd. Flow (perm)	0	1827	1717	0	1718	0
Link Speed (mph)		30	45		45	
Link Distance (ft)		1409	1280		1184	
Travel Time (s)		32.0	19.4		17.9	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Adj. Flow (vph)	38	62	30	41	49	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	100	71	0	76	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.5%		ICU Level of Service A	
Analysis Period (min) 15			

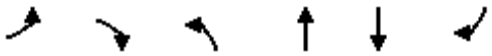
Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	27	44	21	29	35	19
Future Vol, veh/h	27	44	21	29	35	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	62	30	41	49	27

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	71	0	-	0	189	51
Stage 1	-	-	-	-	51	-
Stage 2	-	-	-	-	138	-
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	1529	-	-	-	800	1017
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	889	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1529	-	-	-	779	1017
Mov Cap-2 Maneuver	-	-	-	-	779	-
Stage 1	-	-	-	-	946	-
Stage 2	-	-	-	-	889	-

Approach	EB	WB	SB
HCM Control Delay, s	2.8	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1529	-	-	-	849
HCM Lane V/C Ratio	0.025	-	-	-	0.09
HCM Control Delay (s)	7.4	0	-	-	9.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	101	77	0
Future Volume (vph)	0	0	0	101	77	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1589			1498	1761	
Travel Time (s)	36.1			34.0	40.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	110	84	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	110	84	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 8.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	101	77	0
Future Vol, veh/h	0	0	0	101	77	0
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	0	0	110	84	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	194	84	84	0	-	0
Stage 1	84	-	-	-	-	-
Stage 2	110	-	-	-	-	-
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	795	975	1513	-	-	-
Stage 1	939	-	-	-	-	-
Stage 2	915	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	795	975	1513	-	-	-
Mov Cap-2 Maneuver	795	-	-	-	-	-
Stage 1	939	-	-	-	-	-
Stage 2	915	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1513	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	154.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	0	58	28	0	9	66	2675	79	9	1786	21
Future Vol, veh/h	24	0	58	28	0	9	66	2675	79	9	1786	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	60	-	-	60	300	-	200	300	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	6	2	2	6	2
Mvmt Flow	24	0	59	29	0	9	67	2730	81	9	1822	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3339	4785	911	3793	4725	1365	1843	0	0	2811	0	0
Stage 1	1840	1840	-	2864	2864	-	-	-	-	-	-	-
Stage 2	1499	2945	-	929	1861	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 3	1	277	~ 1	1	137	326	-	-	135	-	-
Stage 1	78	124	-	~ 17	36	-	-	-	-	-	-	-
Stage 2	128	33	-	288	121	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 2	1	277	~ 1	1	137	326	-	-	135	-	-
Mov Cap-2 Maneuver	~ 2	1	-	~ 1	1	-	-	-	-	-	-	-
Stage 1	62	116	-	~ 13	29	-	-	-	-	-	-	-
Stage 2	95	26	-	211	113	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, $	$ 2466.4	$ 14398.3	0.4	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	326	-	-	2	277	1	137	135	-	-
HCM Lane V/C Ratio	0.207	-	-	12.245	0.214	28.571	0.067	0.068	-	-
HCM Control Delay (s)	18.9	-	$	8374.9	21.5	$ 1901	5.6	33.2	33.6	-	-
HCM Lane LOS	C	-	-	F	C	F	D	D	-	-
HCM 95th %tile Q(veh)	0.8	-	-	4.7	0.8	5.4	0.2	0.2	-	-

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

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	51	53	2439	1741	14
Future Vol, veh/h	14	51	53	2439	1741	14
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	-	500	-	-	320
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	52	54	2464	1759	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3099	880	1773	0	-	0
Stage 1	1759	-	-	-	-	-
Stage 2	1340	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 9	290	347	-	-	-
Stage 1	124	-	-	-	-	-
Stage 2	209	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 8	290	347	-	-	-
Mov Cap-2 Maneuver	67	-	-	-	-	-
Stage 1	105	-	-	-	-	-
Stage 2	209	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	39.2	0.4	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	347	-	169	-	-
HCM Lane V/C Ratio	0.154	-	0.389	-	-
HCM Control Delay (s)	17.3	-	39.2	-	-
HCM Lane LOS	C	-	E	-	-
HCM 95th %tile Q(veh)	0.5	-	1.7	-	-

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

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	37	18	13	15	14	33
Future Vol, veh/h	37	18	13	15	14	33
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	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	19	13	15	14	34

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	72	31	48	0	-	0
Stage 1	31	-	-	-	-	-
Stage 2	41	-	-	-	-	-
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	932	1043	1559	-	-	-
Stage 1	992	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	925	1043	1559	-	-	-
Mov Cap-2 Maneuver	925	-	-	-	-	-
Stage 1	984	-	-	-	-	-
Stage 2	981	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	3.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1559	-	961	-	-
HCM Lane V/C Ratio	0.009	-	0.059	-	-
HCM Control Delay (s)	7.3	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	153	177	10	30	7
Future Vol, veh/h	6	153	177	10	30	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	180	208	12	35	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	220	0	-	0	408	214
Stage 1	-	-	-	-	214	-
Stage 2	-	-	-	-	194	-
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	1349	-	-	-	599	826
Stage 1	-	-	-	-	822	-
Stage 2	-	-	-	-	839	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1349	-	-	-	595	826
Mov Cap-2 Maneuver	-	-	-	-	595	-
Stage 1	-	-	-	-	817	-
Stage 2	-	-	-	-	839	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1349	-	-	-	628
HCM Lane V/C Ratio	0.005	-	-	-	0.069
HCM Control Delay (s)	7.7	0	-	-	11.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	28	38	17	18	15
Future Vol, veh/h	13	28	38	17	18	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	30	41	18	19	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	59	0	-	0	108	50
Stage 1	-	-	-	-	50	-
Stage 2	-	-	-	-	58	-
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	1545	-	-	-	889	1018
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	965	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1545	-	-	-	881	1018
Mov Cap-2 Maneuver	-	-	-	-	881	-
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	965	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1545	-	-	-	938
HCM Lane V/C Ratio	0.009	-	-	-	0.038
HCM Control Delay (s)	7.4	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

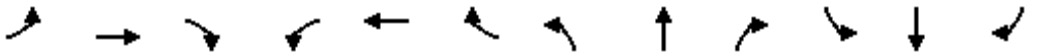
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	113	73	0
Future Vol, veh/h	0	0	0	113	73	0
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	0	0	123	79	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	202	79	79	0	-	0
Stage 1	79	-	-	-	-	-
Stage 2	123	-	-	-	-	-
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	787	981	1519	-	-	-
Stage 1	944	-	-	-	-	-
Stage 2	902	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	787	981	1519	-	-	-
Mov Cap-2 Maneuver	787	-	-	-	-	-
Stage 1	944	-	-	-	-	-
Stage 2	902	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1519	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	1	97	58	1	18	56	1353	30	7	1980	20
Future Volume (vph)	9	1	97	58	1	18	56	1353	30	7	1980	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		60	0		60	300		200	300		200
Storage Lanes	0		1	0		1	1		2	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected		0.957			0.953		0.950			0.950		
Satd. Flow (prot)	0	1783	1583	0	1775	1583	1770	3406	1583	1770	3406	1583
Flt Permitted		0.957			0.953		0.950			0.950		
Satd. Flow (perm)	0	1783	1583	0	1775	1583	1770	3406	1583	1770	3406	1583
Link Speed (mph)		30			30			55			55	
Link Distance (ft)		1456			1472			2369			1464	
Travel Time (s)		33.1			33.5			29.4			18.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	6%	2%	2%	6%	2%
Adj. Flow (vph)	10	1	104	62	1	19	60	1455	32	8	2129	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	11	104	0	63	19	60	1455	32	8	2129	22
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes			Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 74.1%		ICU Level of Service D	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	195.6

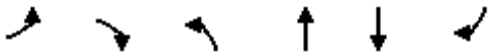
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	1	97	58	1	18	56	1353	30	7	1980	20
Future Vol, veh/h	9	1	97	58	1	18	56	1353	30	7	1980	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	60	-	-	60	300	-	200	300	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	6	2	2	6	2
Mvmt Flow	10	1	104	62	1	19	60	1455	32	8	2129	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2993	3752	1065	2656	3742	728	2151	0	0	1487	0	0
Stage 1	2145	2145	-	1575	1575	-	-	-	-	-	-	-
Stage 2	848	1607	-	1081	2167	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 6	4	219	~ 11	4	366	247	-	-	448	-	-
Stage 1	50	87	-	115	169	-	-	-	-	-	-	-
Stage 2	322	163	-	232	85	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 3	3	219	~ 3	3	366	247	-	-	448	-	-
Mov Cap-2 Maneuver	~ 3	3	-	~ 3	3	-	-	-	-	-	-	-
Stage 1	38	85	-	87	128	-	-	-	-	-	-	-
Stage 2	229	123	-	118	83	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 340.1	$ 8732.6	0.9	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	247	-	-	3	219	3	366	448	-	-
HCM Lane V/C Ratio	0.244	-	-	3.584	0.476	21.147	0.053	0.017	-	-
HCM Control Delay (s)	24.2	-	-	$ 3294.3	3$	$ 1392.1	15.4	13.2	-	-
HCM Lane LOS	C	-	-	F	E	F	C	B	-	-
HCM 95th %tile Q(veh)	0.9	-	-	2.5	2.3	9.9	0.2	0.1	-	-

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



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	55	93	1966	1825	19
Future Volume (vph)	7	55	93	1966	1825	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	500			320
Storage Lanes	1	0	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt	0.880					0.850
Flt Protected	0.995		0.950			
Satd. Flow (prot)	1631	0	1770	3539	3539	1583
Flt Permitted	0.995		0.950			
Satd. Flow (perm)	1631	0	1770	3539	3539	1583
Link Speed (mph)	30			30	30	
Link Distance (ft)	1287			1101	1293	
Travel Time (s)	29.3			25.0	29.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	7	58	98	2069	1921	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	65	0	98	2069	1921	20
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 69.4%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.1

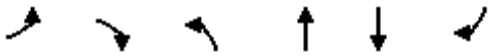
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	55	93	1966	1825	19
Future Vol, veh/h	7	55	93	1966	1825	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	500	-	-	320
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	58	98	2069	1921	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3152	961	1941	0	-	0
Stage 1	1921	-	-	-	-	-
Stage 2	1231	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	8	256	298	-	-	-
Stage 1	101	-	-	-	-	-
Stage 2	239	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 5	256	298	-	-	-
Mov Cap-2 Maneuver	50	-	-	-	-	-
Stage 1	68	-	-	-	-	-
Stage 2	239	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	37.3	1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	298	-	175	-	-
HCM Lane V/C Ratio	0.329	-	0.373	-	-
HCM Control Delay (s)	22.9	-	37.3	-	-
HCM Lane LOS	C	-	E	-	-
HCM 95th %tile Q(veh)	1.4	-	1.6	-	-

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



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	66	5	20	6	12	62
Future Volume (vph)	66	5	20	6	12	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.990				0.886	
Flt Protected	0.956			0.963		
Satd. Flow (prot)	1763	0	0	1794	1650	0
Flt Permitted	0.956			0.963		
Satd. Flow (perm)	1763	0	0	1794	1650	0
Link Speed (mph)	30			30	45	
Link Distance (ft)	1328			1761	1200	
Travel Time (s)	30.2			40.0	18.2	
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Adj. Flow (vph)	90	7	27	8	16	85
Shared Lane Traffic (%)						
Lane Group Flow (vph)	97	0	0	35	101	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.7%		ICU Level of Service A	
Analysis Period (min) 15			

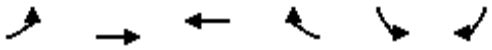
Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	66	5	20	6	12	62
Future Vol, veh/h	66	5	20	6	12	62
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	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	90	7	27	8	16	85

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	121	59	101	0	-	0
Stage 1	59	-	-	-	-	-
Stage 2	62	-	-	-	-	-
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	874	1007	1491	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	961	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	858	1007	1491	-	-	-
Mov Cap-2 Maneuver	858	-	-	-	-	-
Stage 1	947	-	-	-	-	-
Stage 2	961	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	5.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1491	-	867	-	-
HCM Lane V/C Ratio	0.018	-	0.112	-	-
HCM Control Delay (s)	7.5	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	84	134	18	36	9
Future Volume (vph)	8	84	134	18	36	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.984		0.973	
Flt Protected		0.996			0.962	
Satd. Flow (prot)	0	1855	1833	0	1744	0
Flt Permitted		0.996			0.962	
Satd. Flow (perm)	0	1855	1833	0	1744	0
Link Speed (mph)		30	45		45	
Link Distance (ft)		1569	1474		1072	
Travel Time (s)		35.7	22.3		16.2	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	10	104	165	22	44	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	114	187	0	55	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.1%		ICU Level of Service A	
Analysis Period (min) 15			

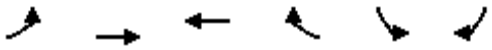
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	84	134	18	36	9
Future Vol, veh/h	8	84	134	18	36	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	104	165	22	44	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	187	0	-	0	300	176
Stage 1	-	-	-	-	176	-
Stage 2	-	-	-	-	124	-
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	1387	-	-	-	691	867
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	902	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1387	-	-	-	685	867
Mov Cap-2 Maneuver	-	-	-	-	685	-
Stage 1	-	-	-	-	848	-
Stage 2	-	-	-	-	902	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1387	-	-	-	715
HCM Lane V/C Ratio	0.007	-	-	-	0.078
HCM Control Delay (s)	7.6	0	-	-	10.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	27	44	21	29	35	19
Future Volume (vph)	27	44	21	29	35	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.922		0.952	
Flt Protected		0.981			0.969	
Satd. Flow (prot)	0	1827	1717	0	1718	0
Flt Permitted		0.981			0.969	
Satd. Flow (perm)	0	1827	1717	0	1718	0
Link Speed (mph)		30	45		45	
Link Distance (ft)		1409	1280		1184	
Travel Time (s)		32.0	19.4		17.9	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Adj. Flow (vph)	38	62	30	41	49	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	100	71	0	76	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.5%		ICU Level of Service A	
Analysis Period (min) 15			

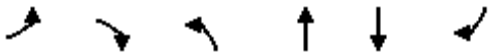
Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	27	44	21	29	35	19
Future Vol, veh/h	27	44	21	29	35	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	62	30	41	49	27

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	71	0	-	0	189	51
Stage 1	-	-	-	-	51	-
Stage 2	-	-	-	-	138	-
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	1529	-	-	-	800	1017
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	889	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1529	-	-	-	779	1017
Mov Cap-2 Maneuver	-	-	-	-	779	-
Stage 1	-	-	-	-	946	-
Stage 2	-	-	-	-	889	-

Approach	EB	WB	SB
HCM Control Delay, s	2.8	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1529	-	-	-	849
HCM Lane V/C Ratio	0.025	-	-	-	0.09
HCM Control Delay (s)	7.4	0	-	-	9.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	24	21	12	107	82	13
Future Volume (vph)	24	21	12	107	82	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.937				0.982	
Flt Protected	0.974			0.995		
Satd. Flow (prot)	1700	0	0	1853	1829	0
Flt Permitted	0.974			0.995		
Satd. Flow (perm)	1700	0	0	1853	1829	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1589			1498	1761	
Travel Time (s)	36.1			34.0	40.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	23	13	116	89	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	49	0	0	129	103	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	24	21	12	107	82	13
Future Vol, veh/h	24	21	12	107	82	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	23	13	116	89	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	238	96	103	0	-	0
Stage 1	96	-	-	-	-	-
Stage 2	142	-	-	-	-	-
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	750	960	1489	-	-	-
Stage 1	928	-	-	-	-	-
Stage 2	885	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	743	960	1489	-	-	-
Mov Cap-2 Maneuver	743	-	-	-	-	-
Stage 1	920	-	-	-	-	-
Stage 2	885	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	0.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1489	-	831	-	-
HCM Lane V/C Ratio	0.009	-	0.059	-	-
HCM Control Delay (s)	7.4	0	9.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	166.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	0	74	28	0	9	72	2682	79	9	1789	22
Future Vol, veh/h	28	0	74	28	0	9	72	2682	79	9	1789	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	60	-	-	60	300	-	200	300	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	6	2	2	6	2
Mvmt Flow	29	0	76	29	0	9	73	2737	81	9	1826	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3359	4808	913	3814	4749	1369	1848	0	0	2818	0	0
Stage 1	1844	1844	-	2883	2883	-	-	-	-	-	-	-
Stage 2	1515	2964	-	931	1866	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 3	1	276	~ 1	1	136	324	-	-	134	-	-
Stage 1	77	124	-	~ 16	36	-	-	-	-	-	-	-
Stage 2	125	32	-	287	121	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 2	1	276	~ 1	1	136	324	-	-	134	-	-
Mov Cap-2 Maneuver	~ 2	1	-	~ 1	1	-	-	-	-	-	-	-
Stage 1	60	116	-	~ 12	28	-	-	-	-	-	-	-
Stage 2	90	25	-	194	113	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, $	$ 2575.8	$ 14398.3	0.5	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	324	-	-	2	276	1	136	134	-	-
HCM Lane V/C Ratio	0.227	-	-	14.286	0.274	28.571	0.068	0.069	-	-
HCM Control Delay (s)	19.3	-	$	9322.8	22.1	$ 19015.6	33.4	33.8	-	-
HCM Lane LOS	C	-	-	F	C	F	D	D	-	-
HCM 95th %tile Q(veh)	0.9	-	-	5.3	1.1	5.4	0.2	0.2	-	-

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

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	19	61	57	2447	1758	16
Future Vol, veh/h	19	61	57	2447	1758	16
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	-	500	-	-	320
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	19	62	58	2472	1776	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3128	888	1792	0	-	0
Stage 1	1776	-	-	-	-	-
Stage 2	1352	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 9	287	341	-	-	-
Stage 1	121	-	-	-	-	-
Stage 2	206	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 7	287	341	-	-	-
Mov Cap-2 Maneuver	64	-	-	-	-	-
Stage 1	100	-	-	-	-	-
Stage 2	206	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	50	0.4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	341	-	157	-	-
HCM Lane V/C Ratio	0.169	-	0.515	-	-
HCM Control Delay (s)	17.7	-	50	-	-
HCM Lane LOS	C	-	F	-	-
HCM 95th %tile Q(veh)	0.6	-	2.5	-	-

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

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	57	19	13	15	14	41
Future Vol, veh/h	57	19	13	15	14	41
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	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	59	20	13	15	14	42

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	76	35	56	0	-	0
Stage 1	35	-	-	-	-	-
Stage 2	41	-	-	-	-	-
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	927	1038	1549	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	920	1038	1549	-	-	-
Mov Cap-2 Maneuver	920	-	-	-	-	-
Stage 1	979	-	-	-	-	-
Stage 2	981	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	3.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1549	-	947	-	-
HCM Lane V/C Ratio	0.009	-	0.083	-	-
HCM Control Delay (s)	7.3	0	9.1	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	155	181	11	31	10
Future Vol, veh/h	7	155	181	11	31	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	182	213	13	36	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	226	0	-	0	418	220
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	198	-
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	1342	-	-	-	591	820
Stage 1	-	-	-	-	817	-
Stage 2	-	-	-	-	835	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1342	-	-	-	587	820
Mov Cap-2 Maneuver	-	-	-	-	587	-
Stage 1	-	-	-	-	811	-
Stage 2	-	-	-	-	835	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1342	-	-	-	631
HCM Lane V/C Ratio	0.006	-	-	-	0.076
HCM Control Delay (s)	7.7	0	-	-	11.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	28	38	17	18	15
Future Vol, veh/h	13	28	38	17	18	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	30	41	18	19	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	59	0	-	0	108	50
Stage 1	-	-	-	-	50	-
Stage 2	-	-	-	-	58	-
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	1545	-	-	-	889	1018
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	965	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1545	-	-	-	881	1018
Mov Cap-2 Maneuver	-	-	-	-	881	-
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	965	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1545	-	-	-	938
HCM Lane V/C Ratio	0.009	-	-	-	0.038
HCM Control Delay (s)	7.4	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	9	3	116	75	5
Future Vol, veh/h	13	9	3	116	75	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	10	3	126	82	5

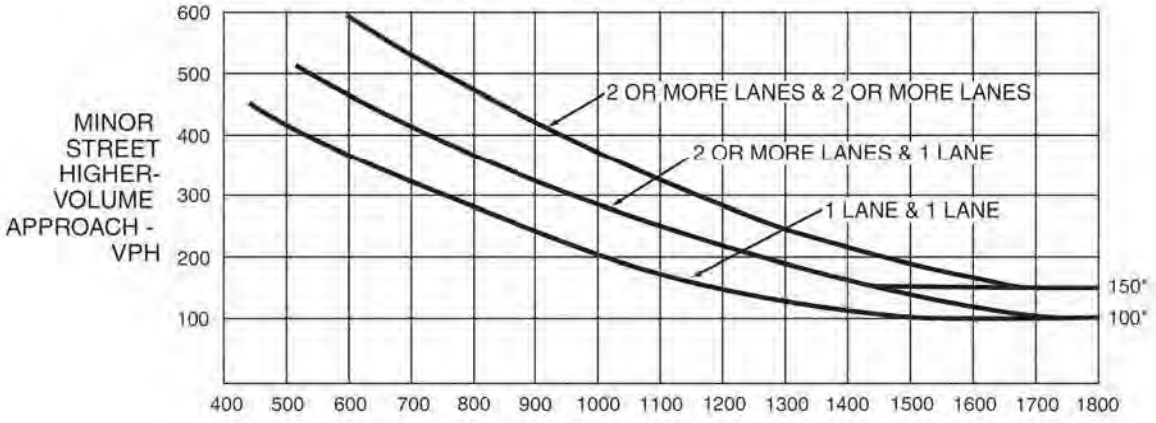
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	217	85	87	0	-	0
Stage 1	85	-	-	-	-	-
Stage 2	132	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	771	974	1509	-	-	-
Stage 1	938	-	-	-	-	-
Stage 2	894	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	769	974	1509	-	-	-
Mov Cap-2 Maneuver	769	-	-	-	-	-
Stage 1	936	-	-	-	-	-
Stage 2	894	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1509	-	841	-	-
HCM Lane V/C Ratio	0.002	-	0.028	-	-
HCM Control Delay (s)	7.4	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

SIGNAL WARRANTS

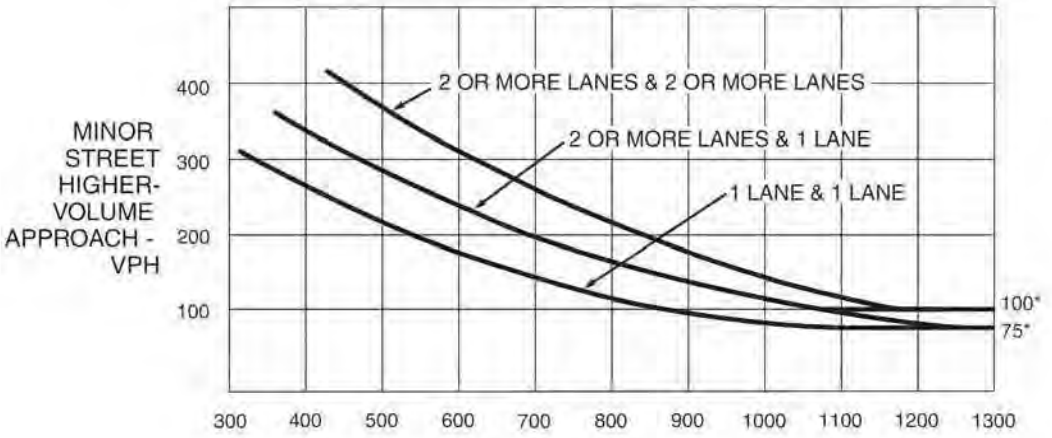
Figure 4C-3. Warrant 3, Peak Hour



*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.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

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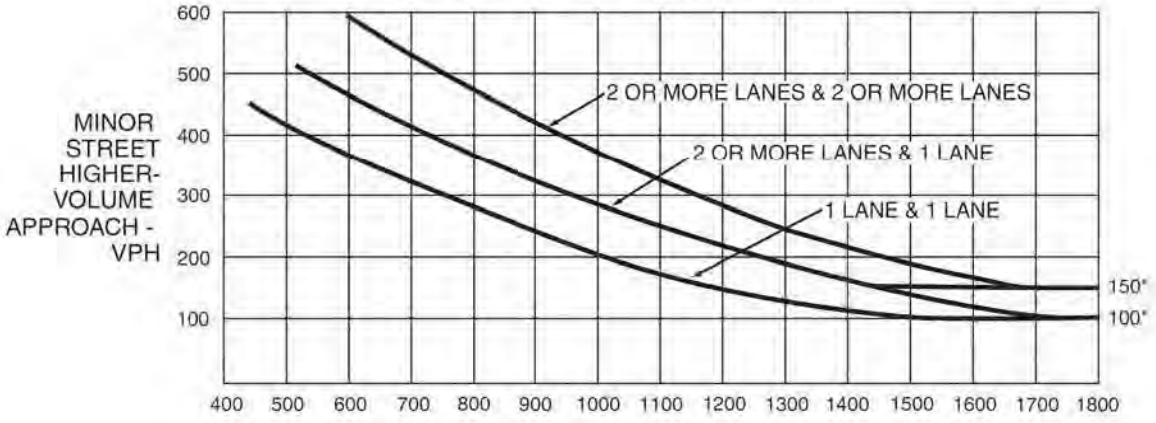
SR 49 – LONE STAR RD : EXISTING

SAT (●) : MAJOR 2254 MINOR 44
PM (■) : MAJOR 3076 MINOR 54

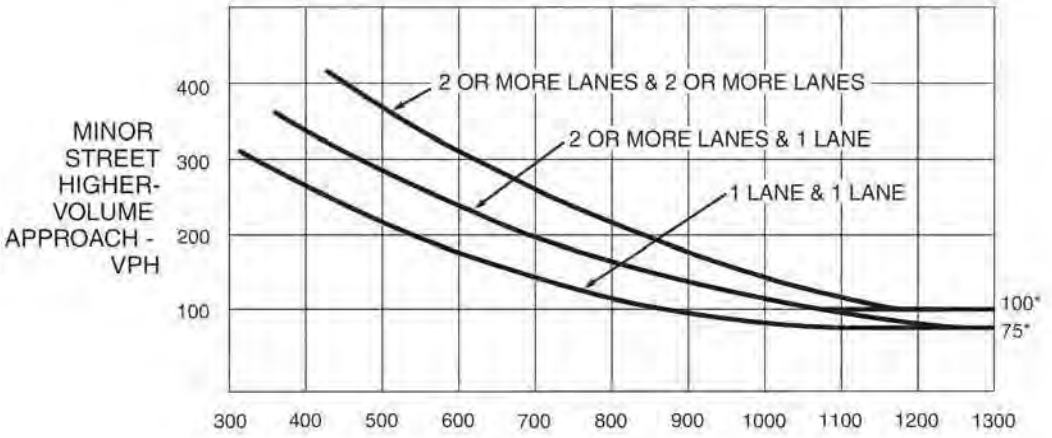
Figure 4C-3. Warrant 3, Peak Hour



*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.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

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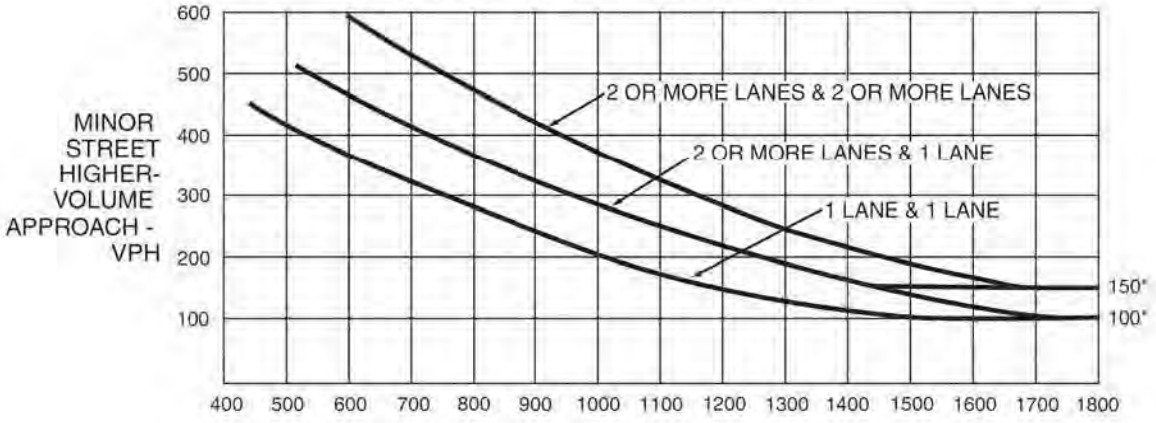
SR 49 – CRAMER RD : EXISTING

SAT (●) : MAJOR 2506 MINOR 20
PM (■) : MAJOR 2802 MINOR 27

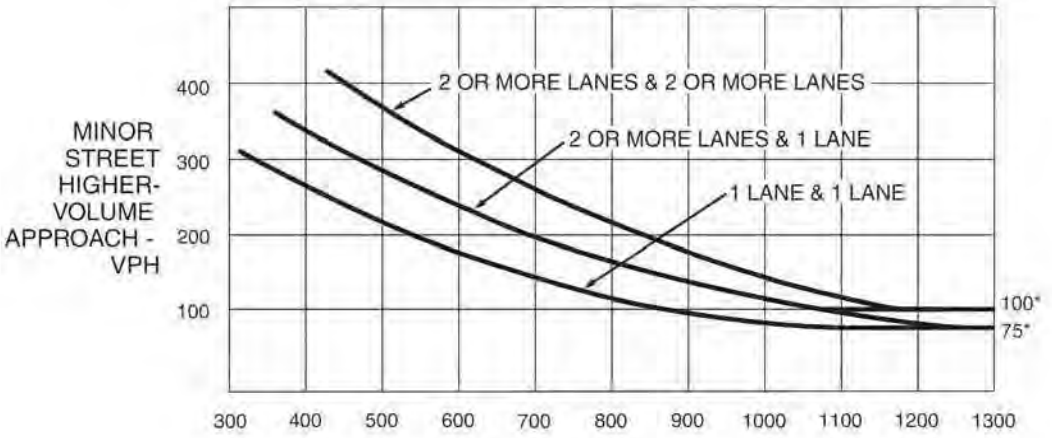
Figure 4C-3. Warrant 3, Peak Hour



*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.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

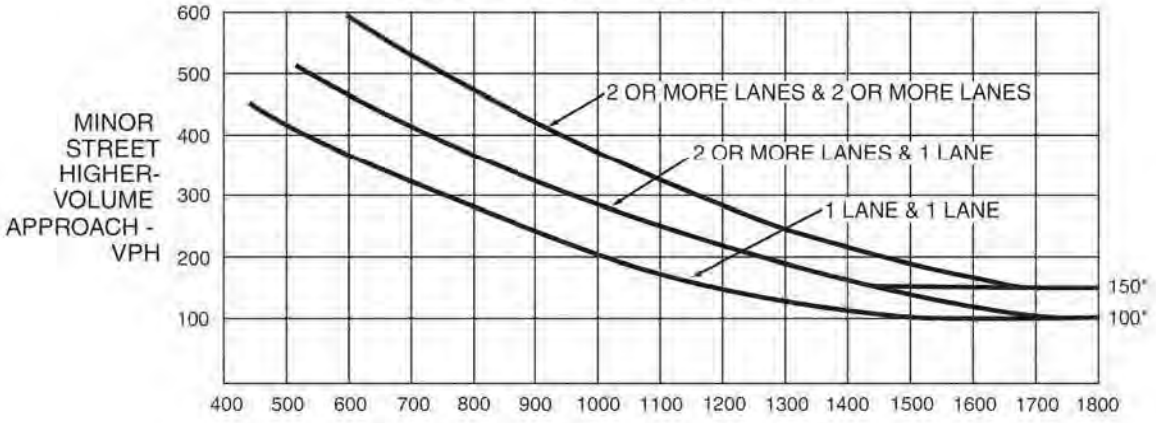


*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

SR 49 – LONE STAR RD : EXISTING PLUS PROJECT

SAT (●) : MAJOR 2290 MINOR 85
PM (■) : MAJOR 3097 MINOR 74

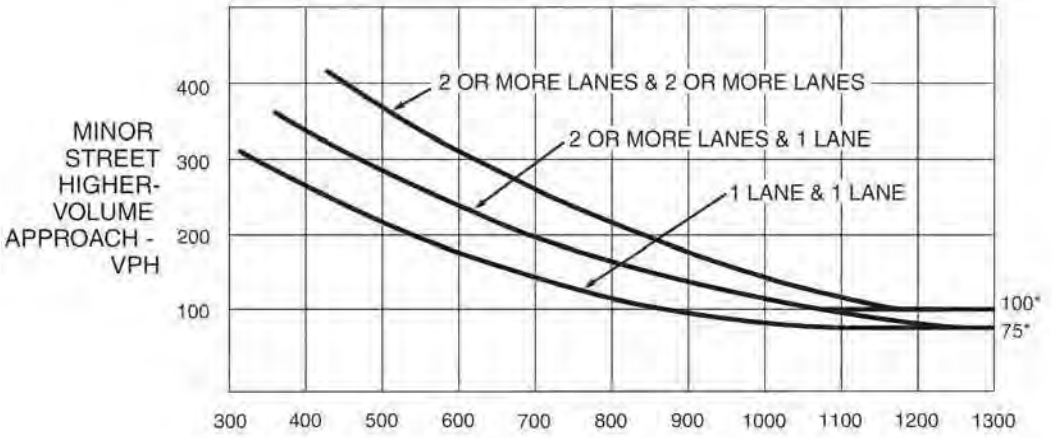
Figure 4C-3. Warrant 3, Peak Hour



*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.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

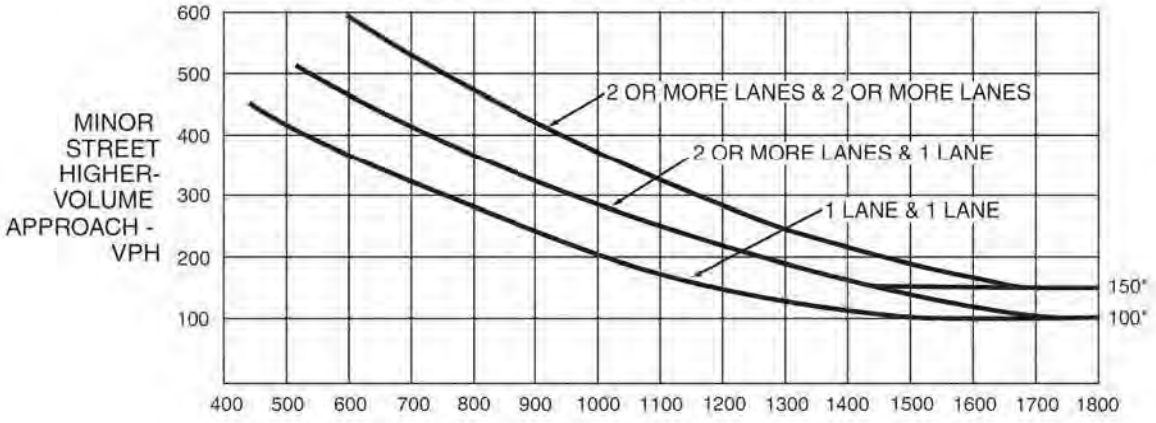


*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

SR 49 – CRAMER RD : EXISTING PLUS PROJECT

SAT (●) : MAJOR 2587 MINOR 49
PM (■) : MAJOR 2837 MINOR 42

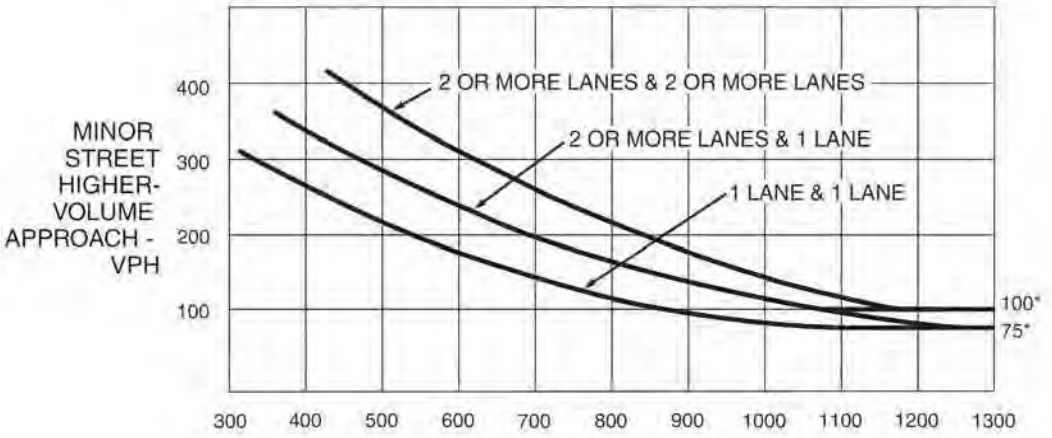
Figure 4C-3. Warrant 3, Peak Hour



*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.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

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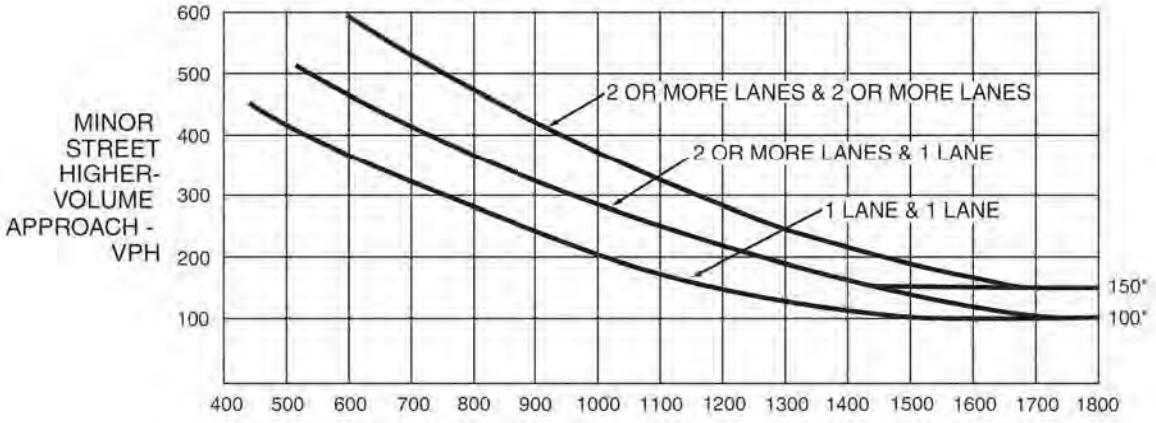
SR 49 – LONE STAR RD : CUMULATIVE

SAT (●) : MAJOR 3413 MINOR 65
PM (■) : MAJOR 4636 MINOR 82

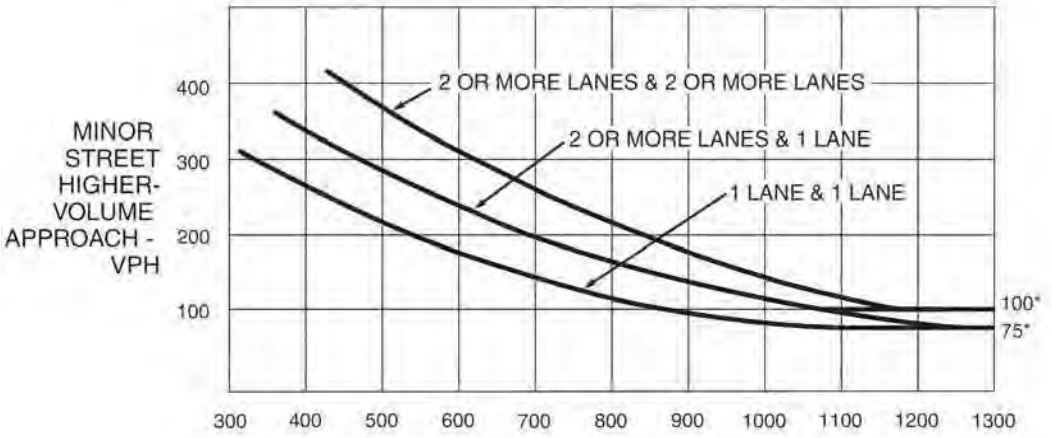
Figure 4C-3. Warrant 3, Peak Hour



*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.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

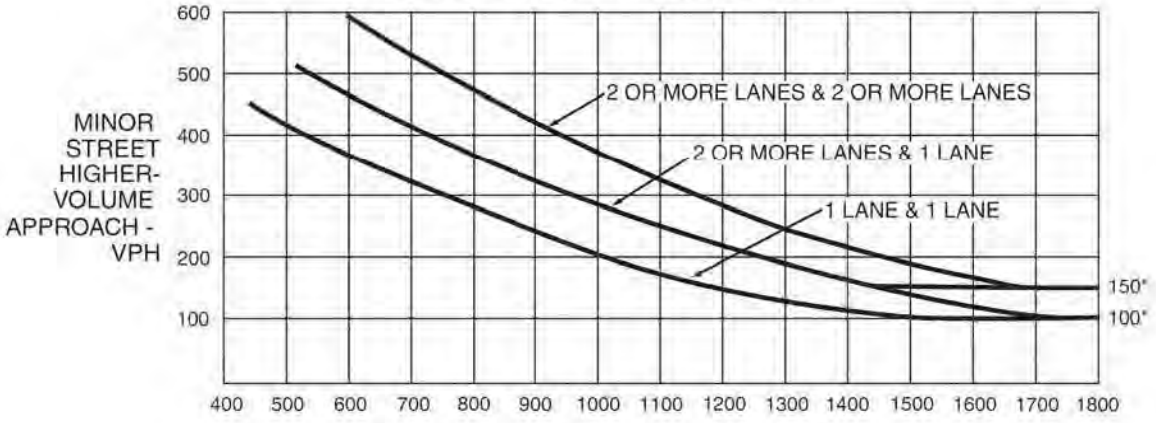


*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

SR 49 – CRAMER RD : CUMULATIVE

SAT (●) : MAJOR 3827 MINOR 33
PM (■) : MAJOR 4247 MINOR 65

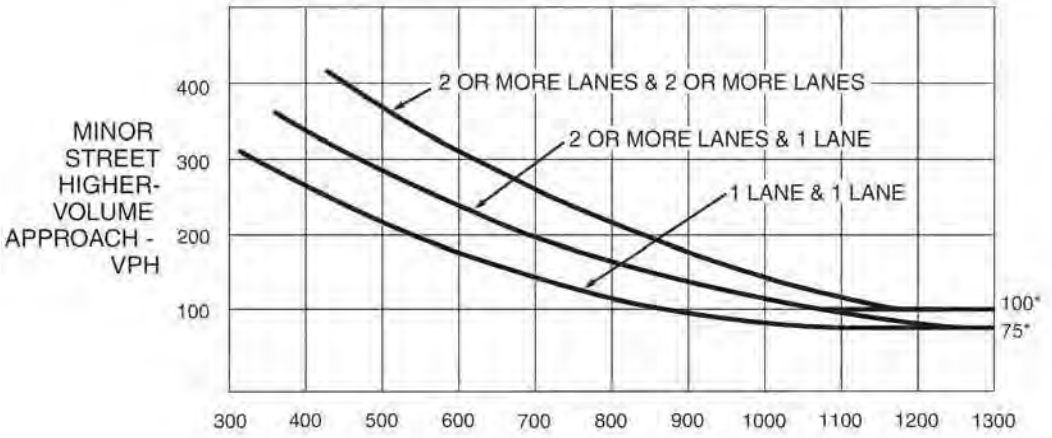
Figure 4C-3. Warrant 3, Peak Hour



*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.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

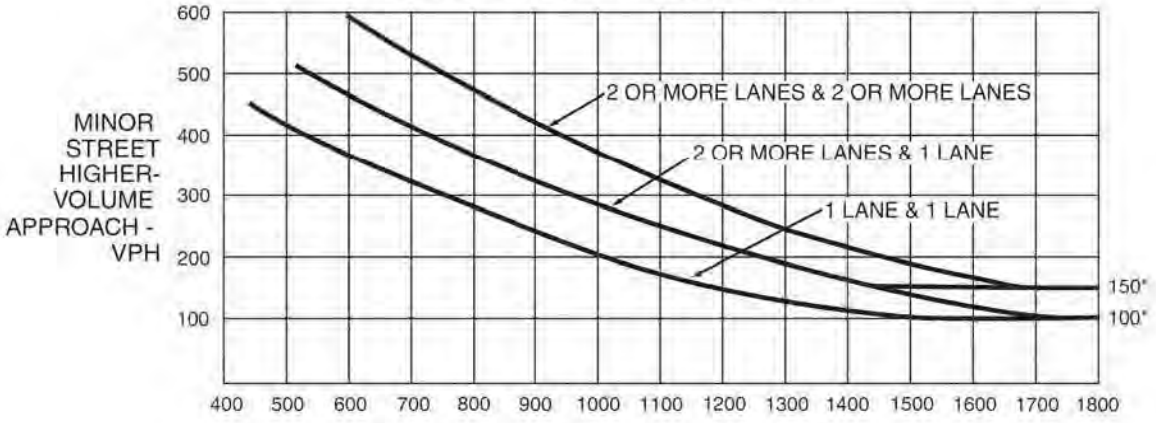


*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

SR 49 – LONE STAR RD : CUMULATIVE PLUS PROJECT

SAT (●) : MAJOR 3446 MINOR 107
PM (■) : MAJOR 4653 MINOR 100

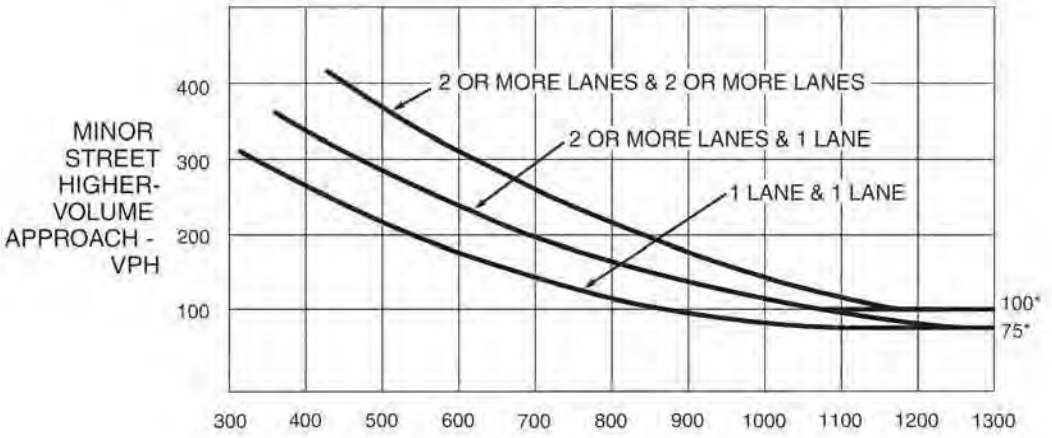
Figure 4C-3. Warrant 3, Peak Hour



*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.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

SR 49 – CRAMER RD : CUMULATIVE PLUS PROJECT

SAT (●) : MAJOR 3903 MINOR 62
PM (■) : MAJOR 4278 MINOR 80