

**FOCUSED TRAFFIC IMPACT ANALYSIS  
FOR PROPOSED**

**MONROE RANCH EVENT FACILITY**

**IN SOLANO COUNTY**

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## 1. Introduction / Executive Summary

This report provides a focused Transportation Impact Analysis to assess potential transportation impacts associated with the proposed Monroe Ranch (Suisun Valley Inn) Event Building (also termed Event Barn) on Suisun Valley Road in Solano County, California. The “project” refers to the proposed event barn (and associated parking supply), which has the primary purpose of hosting weddings, to be constructed on the Monroe Ranch property as an adjunct facility to the existing Suisun Valley Inn. The project site is located at 4400 Suisun Valley Road on the east side of the road approximately one mile north of Rockville Road. (The site location is shown in Figure 1.) Consistent with CEQA guidelines, the following traffic scenarios have been evaluated as part of the traffic operations analysis.

- *Existing and Existing Plus Project* conditions
- *Cumulative and Cumulative Plus Project* conditions
- *Vehicle Access / Turn Lane Assessments* at the Project driveway intersection.

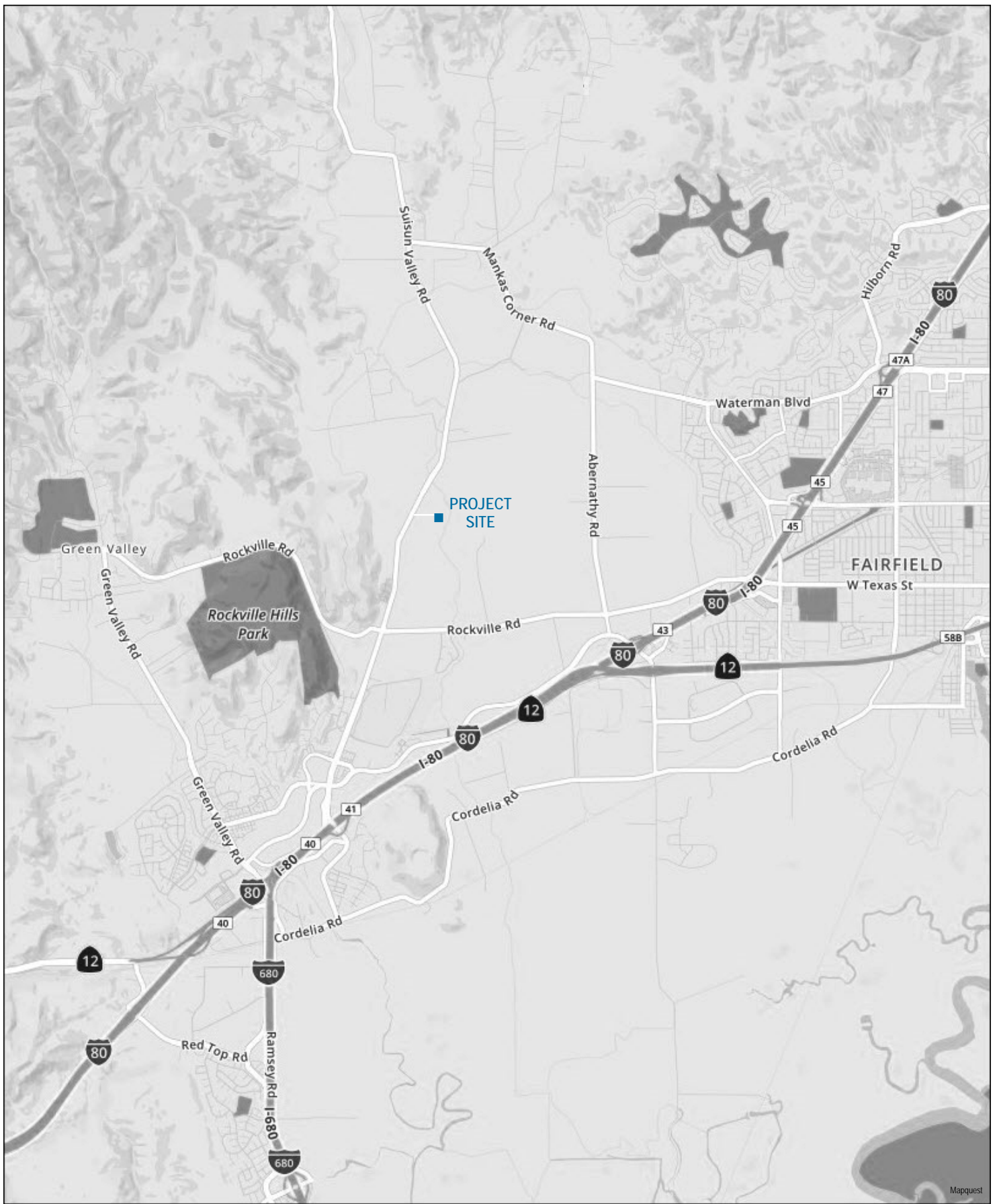
Existing conditions describes the existing transportation facilities serving the project site, and the traffic operations which currently exist for those facilities.

Cumulative conditions reflect long-term traffic growth anticipated to a future horizon year. The cumulative conditions were derived using the Napa-Solano Regional Travel Demand Model for Year 2040 conditions. Cumulative without project conditions represent the land use and circulation assumed within the Model excluding development of the proposed project.

The “*Plus Project*” conditions assess the potential traffic impacts associated with the proposed project in comparison to conditions without the project.

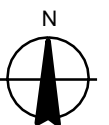
The analysis has determined that the project would not impact traffic level of service conditions based on the Solano County significance thresholds. Driveway operations would remain acceptable during weekend and weekday events for typical sized and maximum sized events. Existing and cumulative operations would operate at LOS ‘B’ or better conditions.

Turning volumes at the project driveway under “plus project” conditions were compared to industry-standard volume thresholds regarding installation of left-turn or right-turn lanes on Suisun Valley Road for entering vehicles. The project volumes would not warrant a separate left-turn lane under existing or cumulative conditions. The project volumes also would not warrant a separate full right-turn lane, but would be at or near the lower threshold level for a right-turn taper / turn apron (wider paved turning radius) at the driveway entrance for right-turn vehicles turning into the driveway.



PROJECT VICINITY

FIGURE 1





## 2. Existing Conditions

The *Existing Conditions* analysis establishes the baseline traffic conditions by quantifying current operations at the study locations.

### Transportation System

#### Roadways

The primary roadway serving the project site is Suisun Valley Road:

**Suisun Valley Road** is oriented in a north-south direction extending north from Interstate 80, to State Route 121 in Napa County (where it becomes Wooden Valley Road). Suisun Valley Road is classified as a Collector road in the Solano County General Plan.<sup>(1)</sup> In the project vicinity, it is a rural two lane roadway with centerline striping and unimproved shoulder areas of various widths (no sidewalks or bicycle lanes). Fronting the project site it is straight and flat with limited shoulders and a posted speed limit of 55 mph. There are also horizontal curves located north and south of the site with advisory speeds of 25 mph and 40 mph, respectively. The Suisun Valley Road/Project Driveway intersection is T-shaped and consists of single lane approaches with stop sign control for the westbound driveway approach.

#### Bicycles

There are currently no striped bicycle lanes or paths on Suisun Valley Road. However, the Solano Transportation Authority has prepared a comprehensive Countywide Bicycle Transportation Plan that has proposed 6.9 miles of Class II bicycle lanes on Suisun Valley Road extending from Mangels Boulevard to the Napa County Line.<sup>(2)</sup>

#### Public Transit

There are currently no fixed route services on Suisun Valley Road fronting the project site. A public bus route providing service between Fairfield and Vallejo Transit Centers is available at Solano Community College located approximately 1.5 miles south of the project site.

### Existing Traffic Volumes

The event barn would primarily be used to host a weekend wedding. Secondary uses may consist of some weekday events (corporate meetings, etc.). Therefore, Weekend (Saturday) afternoon peak period (1:00-3:00 pm) and Weekday PM peak period (4:00-6:00 pm) traffic counts were collected at the intersection of the project site's access driveway (existing Suisun Valley Inn driveway) and Suisun Valley Road.<sup>(3)</sup> The traffic counts were conducted in the month of January. In order to address potentially higher volumes occurring during summer months, Caltrans annual volume data, available for state highways, was evaluated.<sup>(4)</sup> For State Route 121 near Wooden Valley Road, which intersects Suisun Valley Road north of the site, the peak month average daily traffic (ADT) volumes are approximately 22% higher than the average annual daily traffic. Therefore, a 22% increase was applied to the existing traffic counts to conservatively reflect potentially higher volume summer conditions. The existing volumes are shown in Figure 2 on page 10.



### 3. Technical Analysis Parameters and LOS Methodologies

Traffic operating conditions are measured by Level of Service (LOS), which applies a letter ranking to successive levels of roadway and intersection traffic performance. LOS 'A' represents optimum conditions with free-flow travel and no congestion. LOS 'F' represents congested conditions with long delays. When applied to unsignalized intersections with minor street stop controls, the LOS reflects the delays experienced by the minor street approach. For all-way stop and signalized controls, the LOS reflects the average overall intersection delay. Intersection LOS have been determined using the Synchro software suite consistent with the Highway Capacity Manual (HCM 2010) methodology.<sup>(5)</sup> (LOS calculations are provided in the Appendices.)

#### Analysis LOS Policies

##### General Plan Transportation Policies

Solano County Road Improvement Standards and Land Development Requirements (adopted February 2006) establishes the following policy:

Sec. 1-4 - LEVEL OF SERVICE STANDARD: The goal of Solano County is to maintain a Level of Service C on all roads and intersections. In addition to meeting the design widths and standards contained in this document, all projects shall be designed to maintain a Level of Service C, except where the existing level of service is already below C, the project shall be designed such that there will be no decrease in the existing level of service. Levels of Service shall be calculated using the Transportation Research Board's most recent Highway Capacity Manual.

Based on the policy above, a threshold of LOS C has been established for significant impacts.

### 4. Existing Traffic Operations

#### Existing Intersection Operations

*Existing* weekday PM and weekend Afternoon peak hour intersection traffic operations were evaluated utilizing the existing traffic volumes and existing intersection lane geometrics and controls. The Suisun Valley Road/Monroe Ranch Driveway intersection operates at acceptable LOS during weekday and weekend peak hours. The intersection operates at LOS 'B' or better (with 10.5 seconds of delay or less) for the stopped westbound driveway approach. Existing turn volumes at the driveway are low and reflect trips generated by the Suisun Valley Inn. The existing levels of service are shown in Table 1.



**TABLE 1  
EXISTING PEAK HOUR INTERSECTION OPERATIONS  
LEVEL OF SERVICE (LOS) AND SECONDS OF DELAY**

Intersection	Weekday PM Peak Hour  Existing LOS Delay	Saturday Afternoon Peak Hour  Existing LOS Delay
Suisun Valley Rd. / Monroe Ranch Driveway <i>Unsignalized (minor street stop)</i>	B 10.5"	A 0.0"

*Based on Highway Capacity Manual (HCM) Operations methodology for stop-sign controlled (unsignalized) intersections using Synchro-Simtraffic software. Intersection calculation yields an LOS and vehicle delay in seconds.*

## 5. Project Description

The proposed project would consist of construction of an Event Building (also termed Event Barn) with the primary purpose of hosting weddings, typically on weekends. There would also be less frequent events (such as corporate meetings, rehearsal dinners, or charitable events) occurring on some weekdays.

The overall site development consists of four phases. Phase 1 is completed and consisted of upgrading some rooms at the existing Inn. Phase 2 will consist of potential driveway improvements, if required, to accommodate visitors and emergency vehicle access. This may include widening the existing driveway and/or utilizing an alternative driveway on the south side of the property. Phase 3 is the construction of the approximately 4,000 square feet Event Building (the project this report is evaluating). The current design includes providing a supply of 61 onsite parking spaces to serve the property. Phase 4 consists of adding a commercial kitchen to the event building (food will be catered from offsite until the kitchen is constructed).

Information regarding the project was provided by the project applicant and derived from the Use Permit application for the project. The trip generation components of the project would consist of the events held at the Event Barn outlined as follows:

- **Weddings (Weekend Trip Generation):**

The primary purpose of the event barn is to host weddings. The use of the building for such events will require renting out the entire Suisun Valley Inn for the weekend. Therefore, only one wedding would occur per rented weekend. The weddings will typically be held on a Saturday, usually beginning in the afternoon or early evening.

- **Other Events (Weekday Trip Generation):**

A lesser component of the event barn use would consist of weekday events, such as corporate meetings or rehearsal dinners the evening before a wedding. As noted, events held in the Barn would require renting the entire Suisun Valley Inn. Some (or all) of the attendees will be guests staying at the Inn, who would not generate additional vehicle trips for these events. There are also several charitable events annually when the Inn and Barn are open to visitors not staying at the Inn.



## 6. Project Trip Generation

Vehicle trips were calculated for the weddings and the weekday events. The vehicle trips were calculated for “peak period” conditions, corresponding with the peak trip generation before and after the events (typically weekend afternoons for weddings and weekday evening commute periods for the weekday events).

To generate vehicle trips, automobile occupancy rates used by Napa County were utilized to calculate the guest trips.<sup>(6)</sup> Additional vehicle trips generated by temporary staff (catering, entertainment, etc.) were also included using a conservative ratio of one staff person per fifteen guests. (This would reflect an event with full service. Events with buffet service would require fewer staff, and therefore, generate fewer trips than calculated.)

Most of the weddings are expected to have 150 or fewer attendees. Only several weddings per year would be expected to have up to 250 people attending. Vehicle trips were calculated for 150- person and 250-person events. The calculated trips are shown in Table 2.

The most frequent weddings, consisting of up to 150 attendees, are calculated to generate up to 122 trips (61 in prior to the event, and 61 out after the event). The largest weddings with 250 attendees would generate up to 200 total trips (100 in, 100 out). However, offsite parking would be utilized for events exceeding 150 persons. The applicant has a written agreement with Solano Community College to provide up to 100 parking spaces. The college is located approximately 1.5 miles south of the site on Suisun Valley Road. Wedding attendees parked at the college would utilize shuttle buses arranged by the Suisun Valley Inn. As a result, vehicle trips at the project driveway would be lower, with approximately 158 trips (79 in, 79 out).

It is anticipated that attendance for most weekday events would be less than 50 people. A weekday event with 50 attendees is calculated to generate 42 trips (21 in, 21 out), assuming all trips arrive and depart from offsite. Maximum attendance would be limited by the proposed onsite parking supply of 61 parking spaces, resulting in a maximum of 122 trips (61 in, 61 out). Though infrequent, traffic operations were evaluated assuming 61 vehicles which would reflect a maximum sized event.

It is noted that these events are of sufficient duration that the inbound and outbound trips occur in separate hours, thus the number of trips on the street network at one time is half of the total volume. Similarly, only half of the trips are likely to be generated during a peak commute period of the day. For example, a wedding starting during the afternoon commute peak time of day would generate inbound trips during the commute peak period, but the outbound trips would occur later, when background traffic volumes are lower.



**TABLE 2  
TRIP GENERATION  
FOR PROPOSED EVENT BUILDING**

**WEDDINGS (WEEKEND TRIP GENERATION)**

Typical Wedding Attendance:

Guests: up to 150 guests / 2.8 guests per vehicle x 2 one-way trips	= 108 trips
Staff: 10 staff / 1.5 staff per vehicle x 2 o-w trips	= <u>14 trips</u>
<b>Total Trips (150 guests):</b>	<b>= 122 trips</b>

**(61 in before event, 61 out after event)**

Maximum Wedding Attendance\*:

Guests: up to 250 guests / 2.8 guests per vehicle x 2 one-way trips	= 178 trips
Staff: 17 staff / 1.5 staff per vehicle x 2 o-w trips	= <u>22 trips</u>
<b>Total Trips (250 guests):</b>	<b>= 200 trips total (100 in before, 100 out after)</b>

*\*Offsite parking provided for events exceeding 150 guests at Solano Community College with shuttle bus service to/from project site. Trips at project driveway result as follows:*

Trips in/out of Suisun Valley Inn driveway:

Staff: 17 staff / 1.5 staff per vehicle (11 vehicles) x 2 o-w trips	= 22 trips
Guests: Parking for 50 vehicles onsite (140 guests):	= 100 trips
Guests: Shuttle buses (110 guests / 12 per bus = 9 buses x 4 o.w. trips)	= <u>36 trips</u>
	<b>= 158 trips at driveway</b>

**(70 in, 9 out before; 9 in, 70 out after)**

**WEEKDAY TRIP GENERATION**

Typical Attendance:

Guests: approx. 50 guests / 2.6 visitors per vehicle x 2 o-w trips	= 38 trips
Staff: 2 staff / 1.5 staff per vehicle x 2 o-w trips	= <u>4 trips</u>
<b>Total Trips (50 guests):</b>	<b>= 42 trips (21 in before, 21 out after)</b>

Maximum Attendance (based on parking supply of 61 spaces):

Guests: up to 150 guests / 2.6 visitors per vehicle x 2 o-w trips	= 116 trips
Staff: 4 staff / 1.5 staff per vehicle x 2 o-w trips	= <u>6 trips</u>
<b>Total Trips:</b>	<b>= 122 trips (61 in before, 61 out after)</b>

**Trip Distribution**

The directional distribution of vehicle trips for the proposed project has been based on existing traffic flow patterns and geographical location of the project site. Most of the trips would be to/from south of the project site. The existing traffic counts at the project driveway found 100% of the trips were to/from the south. To further substantiate the trip distribution, traffic counts were conducted at two church properties on Suisun Valley Road just south of the project site. The counts identified 90% of trips to/from the south and 10% to/from the north. In order to provide a conservative evaluation of the potential southbound left-turn volumes at the project driveway for the traffic operations analysis, the project trips were distributed with 85% to/from the south and 15% to/from the north. The maximum weekday and weekend project trips are shown in Figure 2.





## 7. Existing Plus Project Conditions

### Intersection Operations

As noted, the inbound and outbound trips are generated in separate hours, resulting in half of the total trips occurring in a given hour. Because the “Before” and “After” event trips occur in separate hours, the LOS analysis evaluated each scenario separately. Half of the event trips would be generated outside of the peak commute time of day. However, to remain conservative, both scenarios were evaluated using the peak commute hour volumes.

The existing plus project peak hour LOS conditions are listed in Table 3. The project driveway intersection would operate at LOS B or better conditions (11.5 seconds of delay or less) before and after events. The intersection would continue to operate acceptably on weekdays and weekends. The existing plus project volumes are shown in Figure 2.

**TABLE 3  
EXISTING AND EXISTING + PROJECT PEAK HOUR INTERSECTION OPERATIONS  
LEVEL OF SERVICE (LOS) AND SECONDS OF DELAY**

Intersection	Weekday PM Peak Hour		Saturday Afternoon Peak Hour	
	Existing LOS Delay	Existing + Project LOS Delay	Existing LOS Delay	Existing + Project LOS Delay
Suisun Valley Rd. / Monroe Ranch Driveway <i>Unsignalized (minor street stop)</i>	B 10.5"		A 0.0"	
Before Typical Size Event:		B 10.7"		A 0.0"
After Typical Size Event:		B 10.7"		B 11.0"
Before Maximum Size Event		B 11.0"		B 10.8"
After Maximum Size Event		B 11.5"		B 11.3"

*Based on Highway Capacity Manual (HCM) Operations methodology for stop-sign controlled (unsignalized) intersections using Synchro-Simtraffic software. Intersection calculation yields an LOS and vehicle delay in seconds.*



## 8. Cumulative Conditions

*Cumulative* conditions refer to a cumulative “No Project” condition where the proposed development remains undeveloped and all model land uses and circulation improvements are assumed to be built.

Cumulative volume projections on Suisun Valley Road were derived using the Napa-Solano Regional Travel Demand Model for Year 2040 conditions.<sup>(7)</sup> The forecast volumes represent an annual increase of 2.15% per year. The annual rate was applied to the existing counts reflecting 21 years of growth (2019 to 2040). The cumulative and cumulative plus project volumes are shown in Figure 3.

### Intersection Operations

Table 4 provides a summary of the *Cumulative* intersection LOS. Weekday and weekend peak hour cumulative conditions without the project would operate acceptably (LOS ‘B’ or better).

## 9. Cumulative Plus Project Conditions

### Intersection Operations

The *Cumulative Plus Project* condition is the analysis scenario in which traffic impacts associated with the proposed project are investigated in comparison to the *Cumulative* condition scenario.

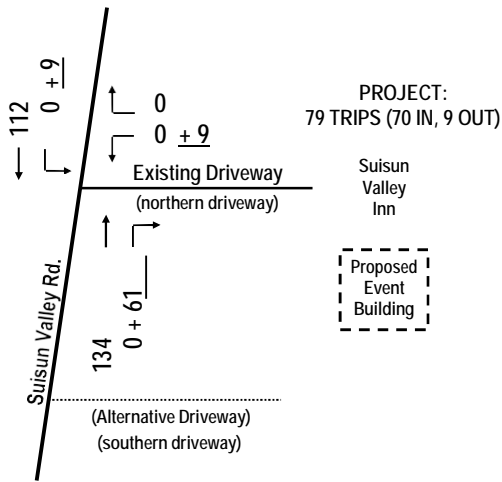
As shown in Table 4, the Suisun Valley Road/Driveway intersection would continue to function acceptably. LOS would remain unchanged, continuing to operate at LOS ‘B’ or better during the weekday and weekend peak hours.

**TABLE 4  
CUMULATIVE AND CUMULATIVE + PROJECT PEAK HOUR INTERSECTION OPERATIONS  
LEVEL OF SERVICE (LOS) AND SECONDS OF DELAY**

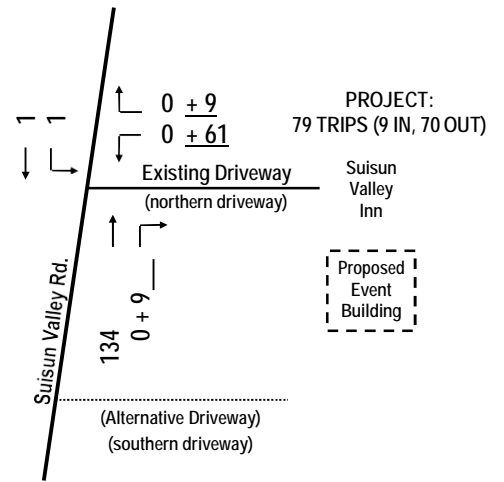
Intersection	Weekday PM Peak Hour		Saturday Afternoon Peak Hour	
	Cumulative LOS Delay	Cumulative + Project LOS Delay	Cumulative LOS Delay	Cumulative + Project LOS Delay
Suisun Valley Rd. / Monroe Ranch Driveway <i>Unsignalized (minor street stop)</i>	B 11.8"		A 0.0"	
Before Typical Size Event:		B 12.0"		A 0.0"
After Typical Size Event:		B 12.0"		B 12.4"
Before Maximum Size Event		B 12.3"		B 11.9"
After Maximum Size Event		B 13.2"		B 12.8"

*Based on Highway Capacity Manual (HCM) Operations methodology for stop-sign controlled (unsignalized) intersections using Synchro-Simtraffic software. Intersection calculation yields an LOS and vehicle delay in seconds.*

Weekend Wedding Event:



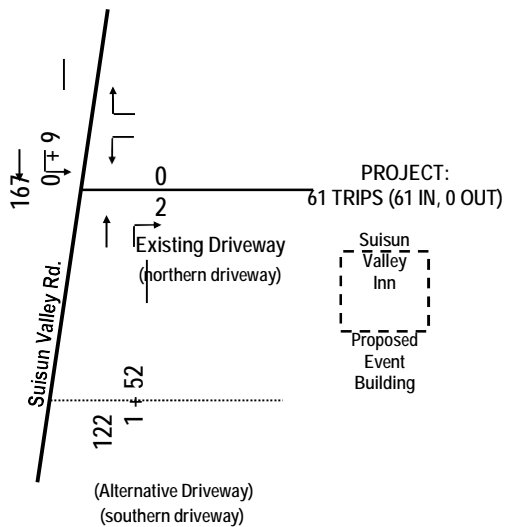
BEFORE EVENT



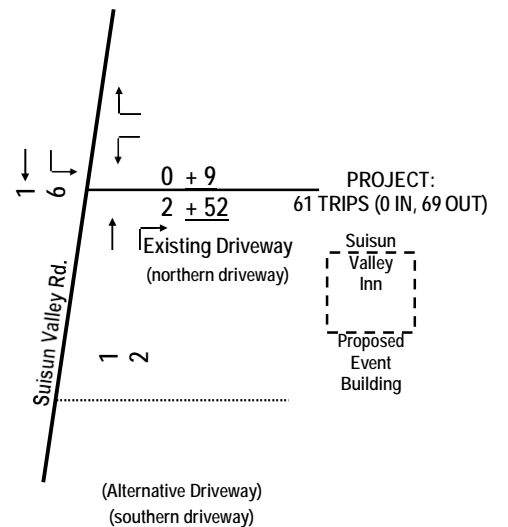
AFTER EVENT

EXISTING WEEKEND PEAK HOUR VOLUMES + PROJECT TRIPS (Maximum)

Weekday Event:



BEFORE EVENT



AFTER EVENT

EXISTING WEEKDAY PEAK HOUR VOLUMES + PROJECT TRIPS (Maximum)  
+ PROJECT TRIPS



FIGURE 2



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EXISTING PEAK HOUR VOLUMES

N

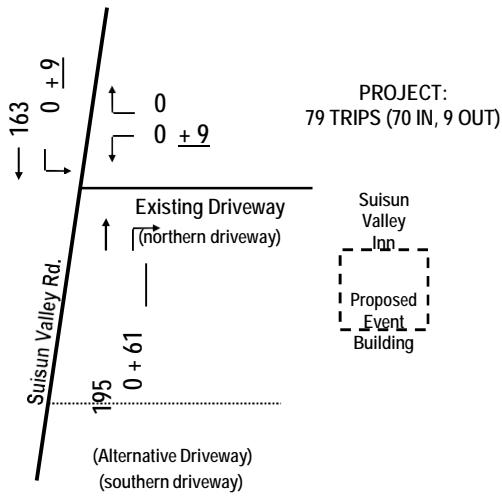


+ PROJECT TRIPS

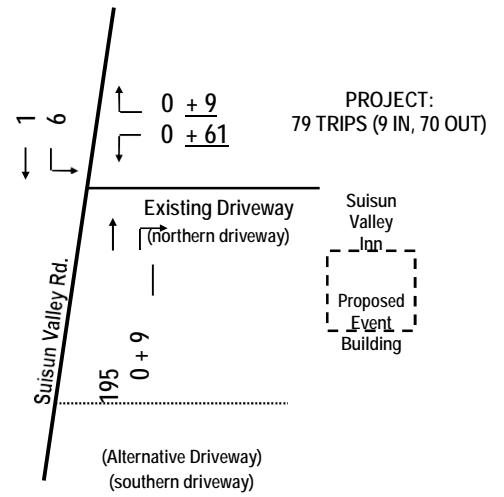
FIGURE 2



Weekend Wedding Event:



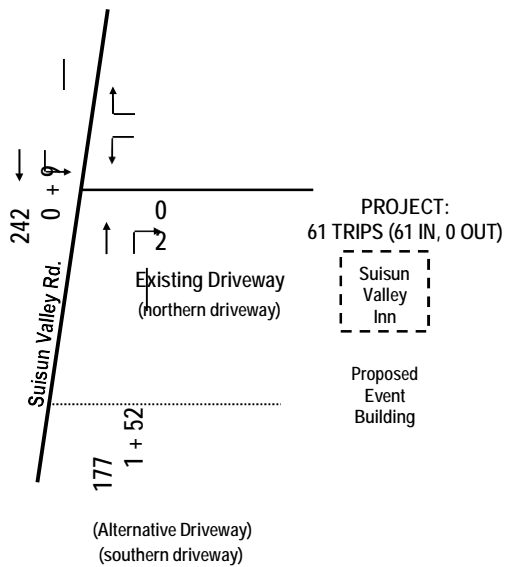
BEFORE EVENT



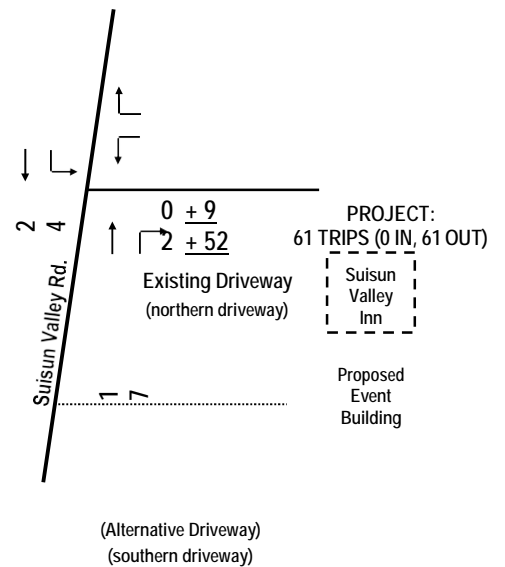
AFTER EVENT

CUMULATIVE WEEKEND PEAK HOUR VOLUMES + PROJECT TRIPS (Maximum)

Weekday Event:



BEFORE EVENT



AFTER EVENT

+ PROJECT TRIPS

FIGURE 3



CUMULATIVE WEEKDAY PEAK HOUR VOLUMES + PROJECT TRIPS (Maximum)

## CUMULATIVE PEAK HOUR VOLUMES

N



+ PROJECT TRIPS

FIGURE 3





## 10. Auxiliary Turn Lane Warrants

The project driveway volumes were compared with guidelines established by the Transportation Research Board (TRB) for warranting installation of a left-turn lane and/or a right-turn lane on Suisun Valley Road.<sup>(8)</sup> (The TRB warrant graphs correspond with the AASHTO guidelines for auxiliary lanes provided in the Policy on Geometric Design of Highways and Streets manual.) The recommendations for installing a left-turn lane are based on opposing traffic volumes approaching the intersection and the percentage of turning vehicles in the approaching volumes. (The warrant graphs for weekend and weekday conditions are provided in the Appendices.)

### Left-Turn Lane

A left-turn lane would not be warranted for southbound Suisun Valley Road under existing or cumulative conditions. The existing and existing-plus-project left-turn volumes at the site driveway would not warrant a left-turn lane, nor would the cumulative and cumulative-plus-project volumes.

### Right-Turn Lane

The existing and existing-plus-project, as well as cumulative and cumulative-plus-project volumes, would not warrant a fully separate right-turn lane.

However, the existing-plus-project volumes for a 150-person event would be near the lower threshold for a right-turn taper or turn apron (wider paved turning radius at the driveway entrance) to facilitate the movement of right-turning vehicles out of the main lane of traffic at the driveway, and volumes would be just above the lower threshold with a 250-person event.

The cumulative-plus-project volumes would be above the lower threshold for a right-turn taper for a 150-person event or 250-person event.



## 11. Project Site Access / Design Parameters

A preliminary site plan is provided in Figure 4. The existing driveway serving the Inn is located toward the northern border of the property. It has a paved width of approximately 12 feet and is bordered on both sides by magnolia trees. The project applicant is aware that the existing driveway may not meet the minimum width requirements for event and/or emergency vehicle access, and that driveway improvements may become a condition of approval for the proposed project.

If driveway improvements are required, several alternative designs could be considered. The existing driveway could be widened, but this would likely require relocating the existing trees aligning the driveway. To retain the trees, a new parallel driveway of equal 12 foot width could be constructed to one side of the existing trees, creating two one-way drive-aisles.

Alternatively, there is an existing unpaved driveway located toward the southern border of the property which is able to provide access to the proposed event building. Improving this driveway may have some advantages to the northern driveway. No trees would need to be removed. Also, at the north driveway there are utility poles in proximity of the driveway entrance that may need to be relocated to accommodate a wider driveway. At the southern driveway, the existing utility pole locations may accommodate a wider driveway without having to be moved.

Operating conditions at the southern driveway would function acceptably, with equal volumes and LOS conditions as the northern driveway, if all trips shift to the southern driveway. Volumes would be slightly lower at the southern driveway if the Suisun Valley Inn trips remain at the north driveway.

Vehicle sight distances along Suisun Valley Road to/from both driveways were evaluated. Caltrans design standards for adequate sight distance are a function of vehicle speeds on the main road. This section of Suisun Valley Road has a posted speed limit of 55 mph. Radar speed surveys of Suisun Valley Road were conducted at the project site. The "critical" vehicle speed (the speed at which 85% of all surveyed vehicles travel at or below) was measured to be 53 mph. Caltrans' design standards for private access intersections recommends maintaining adequate "stopping sight distance" (the distance required for a driver at a given speed to come to a stop after seeing an obstacle on the roadway). Vehicle speeds of 55 mph require a stopping sight distance of 500 feet measured along the travel lanes on Suisun Valley Road.<sup>(9)</sup> Sight distance measurements taken at the driveway locations exceed the recommended distance in both directions at both driveway locations. Therefore, the sight distance recommendations are met. (Keeping vegetation trimmed along the east side of Suisun Valley Road to the extent possible will help retain maximum sight distances.)







## **References:**

- (1) Solano County General Plan, Transportation and Circulation, 2008.
- (2) Solano Transportation Authority, Countywide Bicycle Transportation Plan, 2012.
- (3) National Data Systems, traffic counts on January 11, 2019 (4:00-6:00 p.m.) and January 12, 2019 (1:00-3:00p.m.).
- (4) Caltrans, Traffic Volumes Book 2017, Average and Peak Traffic Volumes.
- (5) Transportation Research Board, Highway Capacity Manual 2010.
- (6) Napa County, Conservation, Development, and Planning Department, "Use Permit Application Package," Napa County Winery Traffic Generation Characteristics, 2019.
- (7) Solano Transportation Authority, Napa-Solano Regional Travel Demand Model (2040).
- (8) Transportation Research Board, National Cooperative Highway Research Program Report 279, "Intersection Channelization Design Guide", November, 1985.
- (9) Caltrans, Highway Design Manual, 6<sup>th</sup> Ed., Stopping/Corner Sight Distance, Chapters 200 and 400, 2018.



## **Appendices**

Synchro Outputs

Turn Lane Warrants

HCM 2010 TWSC  
 1: Suisun Valley Rd. & Monroe Ranch Driveway

Weekend Existing Peak Hour

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	134	0	0	112
Future Vol, veh/h	0	0	134	0	0	112
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	50	50	86	86	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	156	0	0	137

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	293	156	0	0	156
Stage 1	156	-	-	-	-
Stage 2	137	-	-	-	-
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	698	890	-	-	1424
Stage 1	872	-	-	-	-
Stage 2	890	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	698	890	-	-	1424
Mov Cap-2 Maneuver	698	-	-	-	-
Stage 1	872	-	-	-	-
Stage 2	890	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1424
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

HCM 2010 TWSC  
 1: Suisun Valley Rd. & Monroe Ranch Driveway

Weekend Existing + Project: Typical Wedding, 150 guests  
 Inbound Peak Hour, 61 Trips

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	134	52	9	112
Future Vol, veh/h	0	0	134	52	9	112
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	50	50	86	86	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	156	60	11	137

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	345	186	0	0	216
Stage 1	186	-	-	-	-
Stage 2	159	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	652	856	-	-	1354
Stage 1	846	-	-	-	-
Stage 2	870	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	646	856	-	-	1354
Mov Cap-2 Maneuver	646	-	-	-	-
Stage 1	838	-	-	-	-
Stage 2	870	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1354
HCM Lane V/C Ratio	-	-	0.008	-
HCM Control Delay (s)	-	-	0	7.7
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

HCM 2010 TWSC  
 1: Suisun Valley Rd. & Monroe Ranch Driveway

Weekend Existing + Project: Typical Wedding, 150 guests  
 Outbound Peak Hour, 61 Trips

Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	52	9	134	0	0	112
Future Vol, veh/h	52	9	134	0	0	112
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	50	50	86	86	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	104	18	156	0	0	137

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	293	156	0	0	156	0
Stage 1	156	-	-	-	-	-
Stage 2	137	-	-	-	-	-
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	698	890	-	-	1424	-
Stage 1	872	-	-	-	-	-
Stage 2	890	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	698	890	-	-	1424	-
Mov Cap-2 Maneuver	698	-	-	-	-	-
Stage 1	872	-	-	-	-	-
Stage 2	890	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	721	1424
HCM Lane V/C Ratio	-	-	0.169	-
HCM Control Delay (s)	-	-	11	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0

HCM 2010 TWSC  
 1: Suisun Valley Rd. & Monroe Ranch Driveway

Weekend Existing + Project: Maximum Wedding, 250 guests  
 Inbound Peak Hour, 79 Trips

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	0	134	61	9	112
Future Vol, veh/h	9	0	134	61	9	112
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	50	50	86	86	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	0	156	71	11	137

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	351	192	0	0	227	0
Stage 1	192	-	-	-	-	-
Stage 2	159	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	646	850	-	-	1341	-
Stage 1	841	-	-	-	-	-
Stage 2	870	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	640	850	-	-	1341	-
Mov Cap-2 Maneuver	640	-	-	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	870	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	640	1341
HCM Lane V/C Ratio	-	-	0.028	0.008
HCM Control Delay (s)	-	-	10.8	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 2010 TWSC  
 1: Suisun Valley Rd. & Monroe Ranch Driveway

Weekend Existing + Project: Maximum Wedding, 250 guests  
 Outbound Peak Hour, 79 Trips

Intersection						
Int Delay, s/veh	3.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	61	9	134	9	0	112
Future Vol, veh/h	61	9	134	9	0	112
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	50	50	86	86	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	122	18	156	10	0	137

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	298	161	0	0	166	0
Stage 1	161	-	-	-	-	-
Stage 2	137	-	-	-	-	-
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	693	884	-	-	1412	-
Stage 1	868	-	-	-	-	-
Stage 2	890	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	693	884	-	-	1412	-
Mov Cap-2 Maneuver	693	-	-	-	-	-
Stage 1	868	-	-	-	-	-
Stage 2	890	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	713	1412
HCM Lane V/C Ratio	-	-	0.196	-
HCM Control Delay (s)	-	-	11.3	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0



HCM 2010 TWSC  
 1: Suisun Valley Rd. & Monroe Ranch Driveway

Weekday Existing PM Peak Hour

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WT		T			T
Traffic Vol, veh/h	2	0	122	1	0	167
Future Vol, veh/h	2	0	122	1	0	167
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	50	50	84	84	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	0	145	1	0	194

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	340	146	0	0	146	0
Stage 1	146	-	-	-	-	-
Stage 2	194	-	-	-	-	-
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	656	901	-	-	1436	-
Stage 1	881	-	-	-	-	-
Stage 2	839	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	656	901	-	-	1436	-
Mov Cap-2 Maneuver	656	-	-	-	-	-
Stage 1	881	-	-	-	-	-
Stage 2	839	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	656	1436
HCM Lane V/C Ratio	-	-	0.006	-
HCM Control Delay (s)	-	-	10.5	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 2010 TWSC  
 1: Suisun Valley Rd. & Monroe Ranch Driveway

Weekday Existing + Project: Typical Size Event  
 Inbound Peak Hour, 21 Trips

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	0	122	19	3	167
Future Vol, veh/h	2	0	122	19	3	167
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	50	50	84	84	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	0	145	23	3	194

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	357	157	0	0	168
Stage 1	157	-	-	-	-
Stage 2	200	-	-	-	-
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	641	889	-	-	1410
Stage 1	871	-	-	-	-
Stage 2	834	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	640	889	-	-	1410
Mov Cap-2 Maneuver	640	-	-	-	-
Stage 1	869	-	-	-	-
Stage 2	834	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	640	1410
HCM Lane V/C Ratio	-	-	0.006	0.002
HCM Control Delay (s)	-	-	10.7	7.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 2010 TWSC  
 1: Suisun Valley Rd. & Monroe Ranch Driveway

Weekday Existing + Project: Typical Size Event  
 Outbound Peak Hour, 21 Trips

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	20	3	122	1	0	167
Future Vol, veh/h	20	3	122	1	0	167
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	50	50	84	84	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	6	145	1	0	194

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	340	146	0	0	146
Stage 1	146	-	-	-	-
Stage 2	194	-	-	-	-
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	656	901	-	-	1436
Stage 1	881	-	-	-	-
Stage 2	839	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	656	901	-	-	1436
Mov Cap-2 Maneuver	656	-	-	-	-
Stage 1	881	-	-	-	-
Stage 2	839	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	680	1436
HCM Lane V/C Ratio	-	-	0.068	-
HCM Control Delay (s)	-	-	10.7	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0

HCM 2010 TWSC  
 1: Suisun Valley Rd. & Monroe Ranch Driveway

Weekday Existing + Project: Maximum Size Event  
 Inbound Peak Hour, 61 Trips

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	0	122	53	9	167
Future Vol, veh/h	2	0	122	53	9	167
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	50	50	84	84	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	0	145	63	10	194

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	391	177	0	0	208	0
Stage 1	177	-	-	-	-	-
Stage 2	214	-	-	-	-	-
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	613	866	-	-	1363	-
Stage 1	854	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	608	866	-	-	1363	-
Mov Cap-2 Maneuver	608	-	-	-	-	-
Stage 1	847	-	-	-	-	-
Stage 2	822	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	608	1363
HCM Lane V/C Ratio	-	-	0.007	0.008
HCM Control Delay (s)	-	-	11	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 2010 TWSC  
 1: Suisun Valley Rd. & Monroe Ranch Driveway

Weekday Existing + Project: Maximum Size Event  
 Outbound Peak Hour, 61 Trips

Intersection						
Int Delay, s/veh	3.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	54	9	122	1	0	167
Future Vol, veh/h	54	9	122	1	0	167
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	50	50	84	84	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	108	18	145	1	0	194

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	340	146	0	0	146
Stage 1	146	-	-	-	-
Stage 2	194	-	-	-	-
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	656	901	-	-	1436
Stage 1	881	-	-	-	-
Stage 2	839	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	656	901	-	-	1436
Mov Cap-2 Maneuver	656	-	-	-	-
Stage 1	881	-	-	-	-
Stage 2	839	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	683	1436
HCM Lane V/C Ratio	-	-	0.184	-
HCM Control Delay (s)	-	-	11.5	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	195	0	0	163
Future Vol, veh/h	0	0	195	0	0	163
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	50	50	86	86	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	227	0	0	199

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	426	227	0	0	227	0
Stage 1	227	-	-	-	-	-
Stage 2	199	-	-	-	-	-
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	585	812	-	-	1341	-
Stage 1	811	-	-	-	-	-
Stage 2	835	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	585	812	-	-	1341	-
Mov Cap-2 Maneuver	585	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	835	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	-	1341
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM 2010 TWSC  
 1: Suisun Valley Rd. & Monroe Ranch Driveway

Weekend Cumulative + Project: Typical Wedding, 150 guests  
 Inbound Peak Hour, 61 Trips

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	195	52	9	163
Future Vol, veh/h	0	0	195	52	9	163
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	50	50	86	86	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	227	60	11	199

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	478	257	0	0	287
Stage 1	257	-	-	-	-
Stage 2	221	-	-	-	-
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	546	782	-	-	1275
Stage 1	786	-	-	-	-
Stage 2	816	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	541	782	-	-	1275
Mov Cap-2 Maneuver	541	-	-	-	-
Stage 1	778	-	-	-	-
Stage 2	816	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1275
HCM Lane V/C Ratio	-	-	0.009	-
HCM Control Delay (s)	-	-	0	7.8
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

HCM 2010 TWSC  
 1: Suisun Valley Rd. & Monroe Ranch Driveway

Weekend Cumulative + Project: Typical Wedding, 150 guests  
 Outbound Peak Hour, 61 Trips

Intersection						
Int Delay, s/veh	2.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	52	9	195	0	0	163
Future Vol, veh/h	52	9	195	0	0	163
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	50	50	86	86	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	104	18	227	0	0	199

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	426	227	0	0	227	0
Stage 1	227	-	-	-	-	-
Stage 2	199	-	-	-	-	-
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	585	812	-	-	1341	-
Stage 1	811	-	-	-	-	-
Stage 2	835	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	585	812	-	-	1341	-
Mov Cap-2 Maneuver	585	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	835	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	610	1341
HCM Lane V/C Ratio	-	-	0.2	-
HCM Control Delay (s)	-	-	12.4	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0



HCM 2010 TWSC  
 1: Suisun Valley Rd. & Monroe Ranch Driveway

Weekend Cumulative + Project: Maximum Wedding, 250 guests  
 Inbound Peak Hour, 79 Trips

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	0	195	61	9	163
Future Vol, veh/h	9	0	195	61	9	163
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	50	50	86	86	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	0	227	71	11	199

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	484	263	0	0	298
Stage 1	263	-	-	-	-
Stage 2	221	-	-	-	-
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	542	776	-	-	1263
Stage 1	781	-	-	-	-
Stage 2	816	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	537	776	-	-	1263
Mov Cap-2 Maneuver	537	-	-	-	-
Stage 1	773	-	-	-	-
Stage 2	816	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.9	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	537	1263
HCM Lane V/C Ratio	-	-	0.034	0.009
HCM Control Delay (s)	-	-	11.9	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 2010 TWSC  
 1: Suisun Valley Rd. & Monroe Ranch Driveway

Weekend Cumulative + Project: Maximum Wedding, 250 guests  
 Outbound Peak Hour, 79 Trips

Intersection						
Int Delay, s/veh	3.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	61	9	195	9	0	163
Future Vol, veh/h	61	9	195	9	0	163
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	50	50	86	86	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	122	18	227	10	0	199

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	431	232	0
Stage 1	232	-	-
Stage 2	199	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	581	807	-
Stage 1	807	-	-
Stage 2	835	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	581	807	-
Mov Cap-2 Maneuver	581	-	-
Stage 1	807	-	-
Stage 2	835	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	603	1330
HCM Lane V/C Ratio	-	-	0.232	-
HCM Control Delay (s)	-	-	12.8	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.9	0

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	0	177	1	0	242
Future Vol, veh/h	2	0	177	1	0	242
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	50	50	84	84	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	0	211	1	0	281

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	493	212	0	0	212
Stage 1	212	-	-	-	-
Stage 2	281	-	-	-	-
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	535	828	-	-	1358
Stage 1	823	-	-	-	-
Stage 2	767	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	535	828	-	-	1358
Mov Cap-2 Maneuver	535	-	-	-	-
Stage 1	823	-	-	-	-
Stage 2	767	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	535	1358
HCM Lane V/C Ratio	-	-	0.007	-
HCM Control Delay (s)	-	-	11.8	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 2010 TWSC  
 1: Suisun Valley Rd. & Monroe Ranch Driveway

Weekday Cumulative + Project: Typical Size Event  
 Inbound Peak Hour, 21 Trips

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WT		TB			BT
Traffic Vol, veh/h	2	0	177	19	3	242
Future Vol, veh/h	2	0	177	19	3	242
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	50	50	84	84	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	0	211	23	3	281

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	510	223	0	0	234
Stage 1	223	-	-	-	-
Stage 2	287	-	-	-	-
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	523	817	-	-	1333
Stage 1	814	-	-	-	-
Stage 2	762	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	521	817	-	-	1333
Mov Cap-2 Maneuver	521	-	-	-	-
Stage 1	812	-	-	-	-
Stage 2	762	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	521	1333
HCM Lane V/C Ratio	-	-	0.008	0.003
HCM Control Delay (s)	-	-	12	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 2010 TWSC  
 1: Suisun Valley Rd. & Monroe Ranch Driveway

Weekday Cumulative + Project: Typical Size Event  
 Outbound Peak Hour, 21 Trips

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	TT		T			T
Traffic Vol, veh/h	20	3	177	1	0	242
Future Vol, veh/h	20	3	177	1	0	242
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	50	50	84	84	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	6	211	1	0	281

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	493	212	0	0	212	0
Stage 1	212	-	-	-	-	-
Stage 2	281	-	-	-	-	-
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	535	828	-	-	1358	-
Stage 1	823	-	-	-	-	-
Stage 2	767	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	535	828	-	-	1358	-
Mov Cap-2 Maneuver	535	-	-	-	-	-
Stage 1	823	-	-	-	-	-
Stage 2	767	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	561	1358
HCM Lane V/C Ratio	-	-	0.082	-
HCM Control Delay (s)	-	-	12	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0

HCM 2010 TWSC  
 1: Suisun Valley Rd. & Monroe Ranch Driveway

Weekday Cumulative + Project: Maximum Size Event  
 Inbound Peak Hour, 61 Trips

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WT		TB			BT
Traffic Vol, veh/h	2	0	177	53	9	242
Future Vol, veh/h	2	0	177	53	9	242
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	50	50	84	84	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	0	211	63	10	281

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	544	243	0	0	274	0
Stage 1	243	-	-	-	-	-
Stage 2	301	-	-	-	-	-
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	500	796	-	-	1289	-
Stage 1	797	-	-	-	-	-
Stage 2	751	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	496	796	-	-	1289	-
Mov Cap-2 Maneuver	496	-	-	-	-	-
Stage 1	790	-	-	-	-	-
Stage 2	751	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.3	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	496	1289
HCM Lane V/C Ratio	-	-	0.008	0.008
HCM Control Delay (s)	-	-	12.3	7.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

HCM 2010 TWSC  
 1: Suisun Valley Rd. & Monroe Ranch Driveway

Weekday Cumulative + Project: Maximum Size Event  
 Outbound Peak Hour, 61 Trips

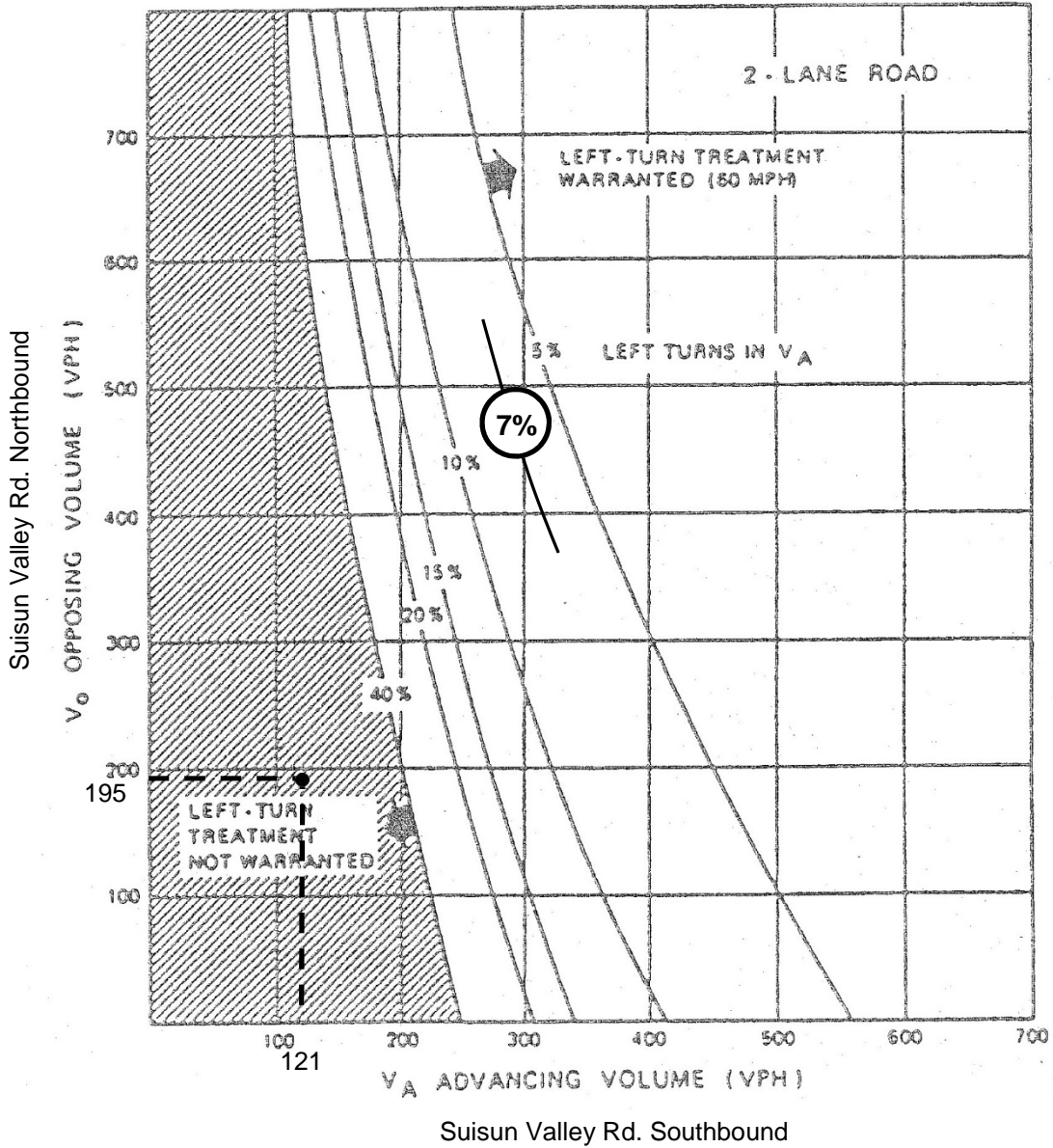
Intersection						
Int Delay, s/veh	2.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	54	9	177	1	0	242
Future Vol, veh/h	54	9	177	1	0	242
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	84	84	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	108	18	211	1	0	281

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	493	212	0	0	212	0
Stage 1	212	-	-	-	-	-
Stage 2	281	-	-	-	-	-
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	535	828	-	-	1358	-
Stage 1	823	-	-	-	-	-
Stage 2	767	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	535	828	-	-	1358	-
Mov Cap-2 Maneuver	535	-	-	-	-	-
Stage 1	823	-	-	-	-	-
Stage 2	767	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	563	1358
HCM Lane V/C Ratio	-	-	0.224	-
HCM Control Delay (s)	-	-	13.2	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.9	0

## LEFT TURN LANE WARRANTS



Monroe Ranch (Suisun Valley Inn) Event Barn Project

Suisun Valley Rd. / Driveway

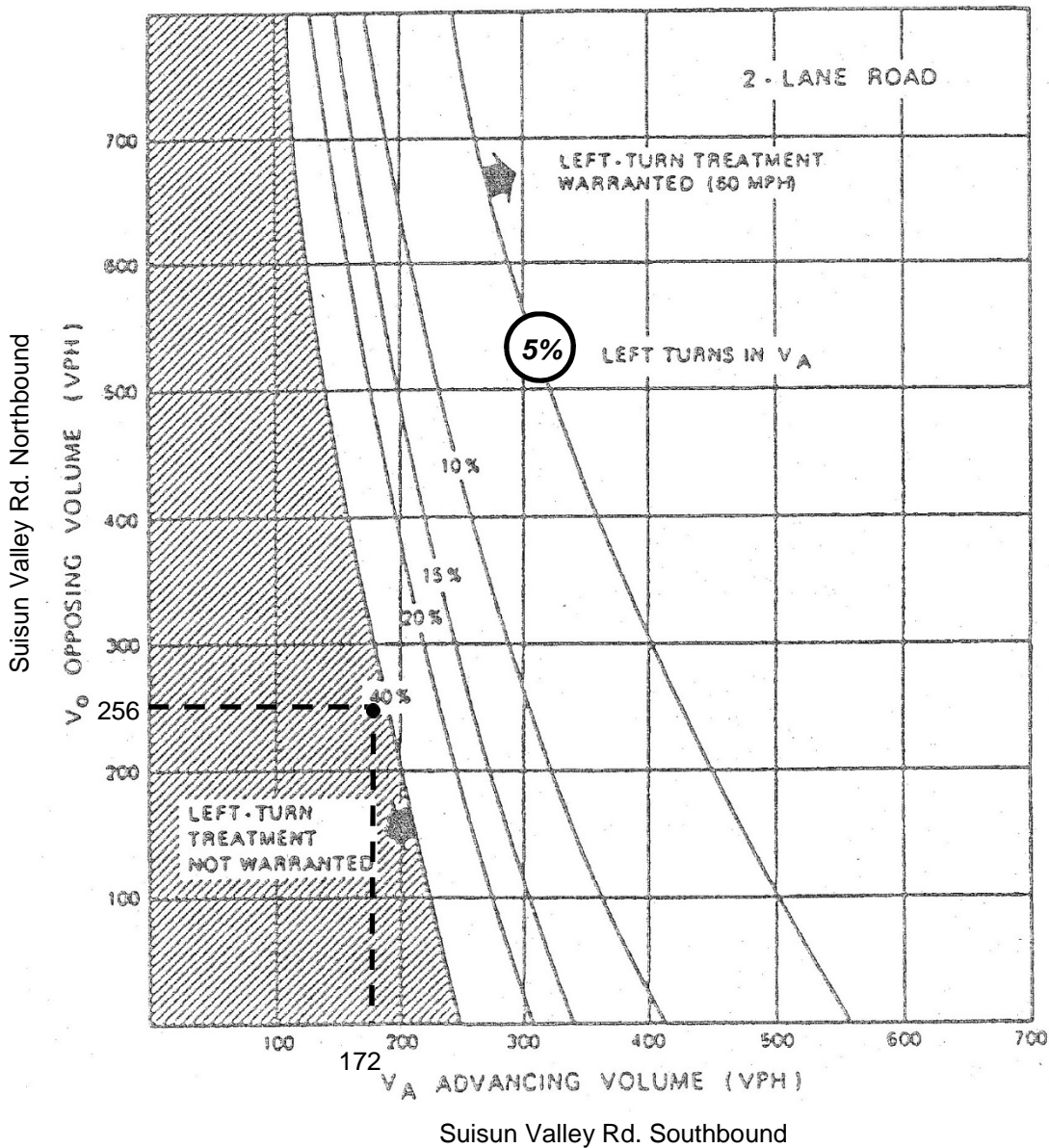
EXISTING + WEEKEND WEDDING 250 GUESTS, BEFORE EVENT

$V_A = 121$       L.T. % =  $9/121 = 7\%$        $V_O = 195$

LEFT TURN LANE NOT WARRANTED



LEFT TURN LANE WARRANTS



Monroe Ranch (Suisun Valley Inn) Event Barn Project

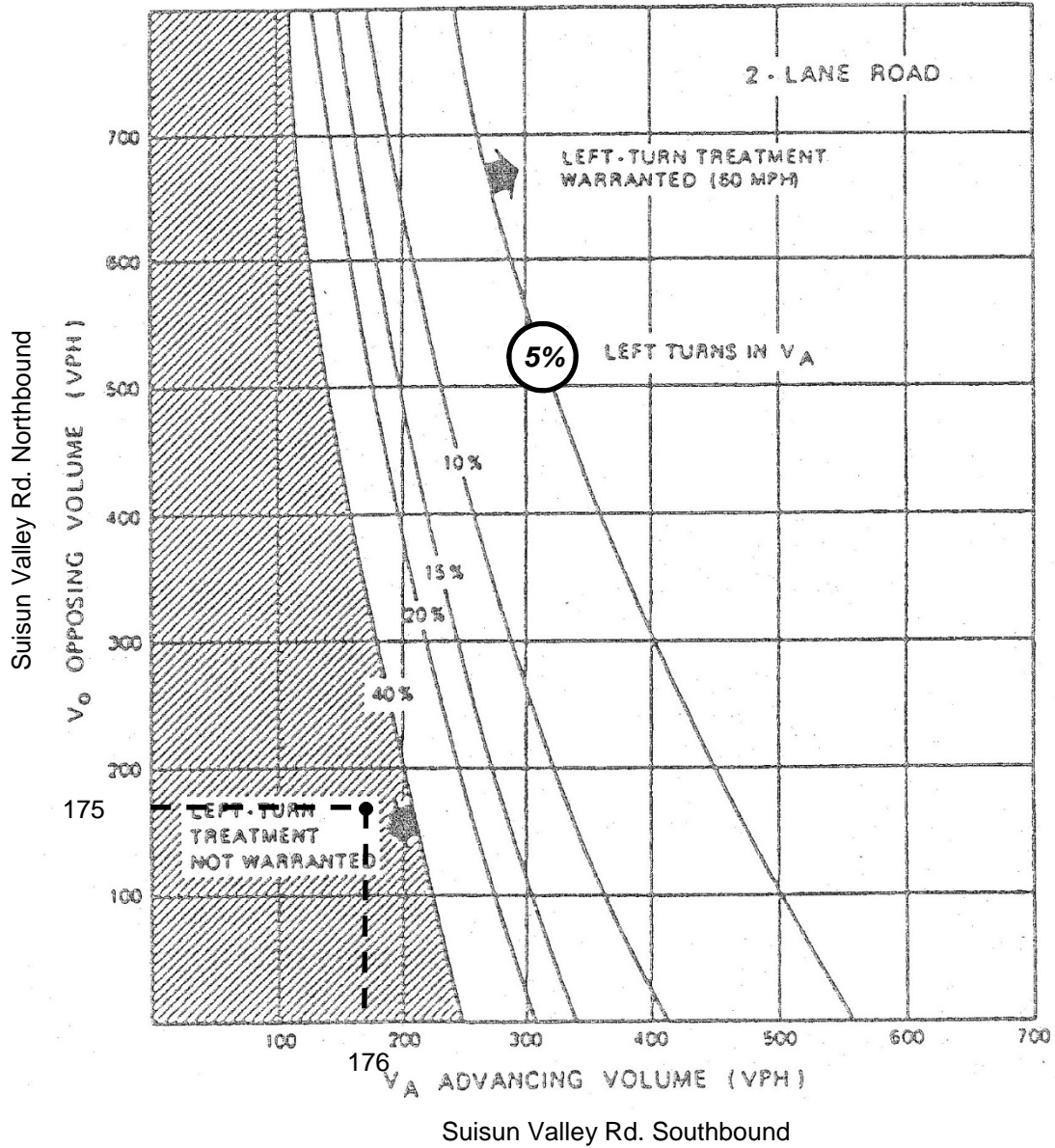
Suisun Valley Rd. / Driveway

CUMULATIVE + WEEKEND WEDDING 250 GUESTS, BEFORE EVENT

$V_A = 172$       L.T. % =  $9/172 = 5\%$        $V_O = 256$

LEFT TURN LANE NOT WARRANTED

## LEFT TURN LANE WARRANTS



Monroe Ranch (Suisun Valley Inn) Event Barn Project

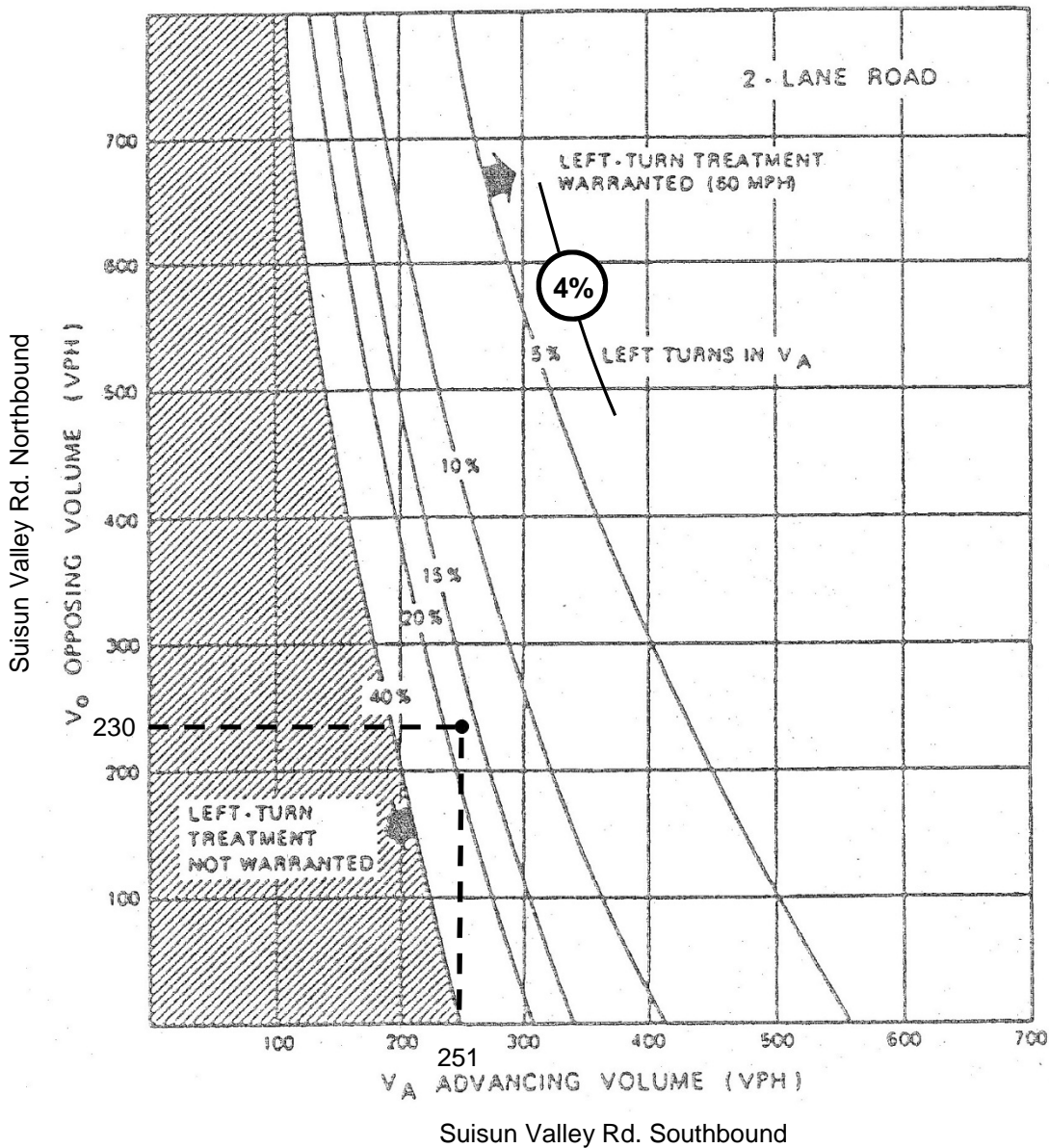
Suisun Valley Rd. / Driveway

EXISTING + WEEKDAY MAXIMUM SIZE EVENT (61 CARS), BEFORE EVENT

$$V_A = 176 \quad \text{L.T. \%} = 9/176 = 5\% \quad V_O = 175$$

LEFT TURN LANE NOT WARRANTED

LEFT TURN LANE WARRANTS



Monroe Ranch (Suisun Valley Inn) Event Barn Project

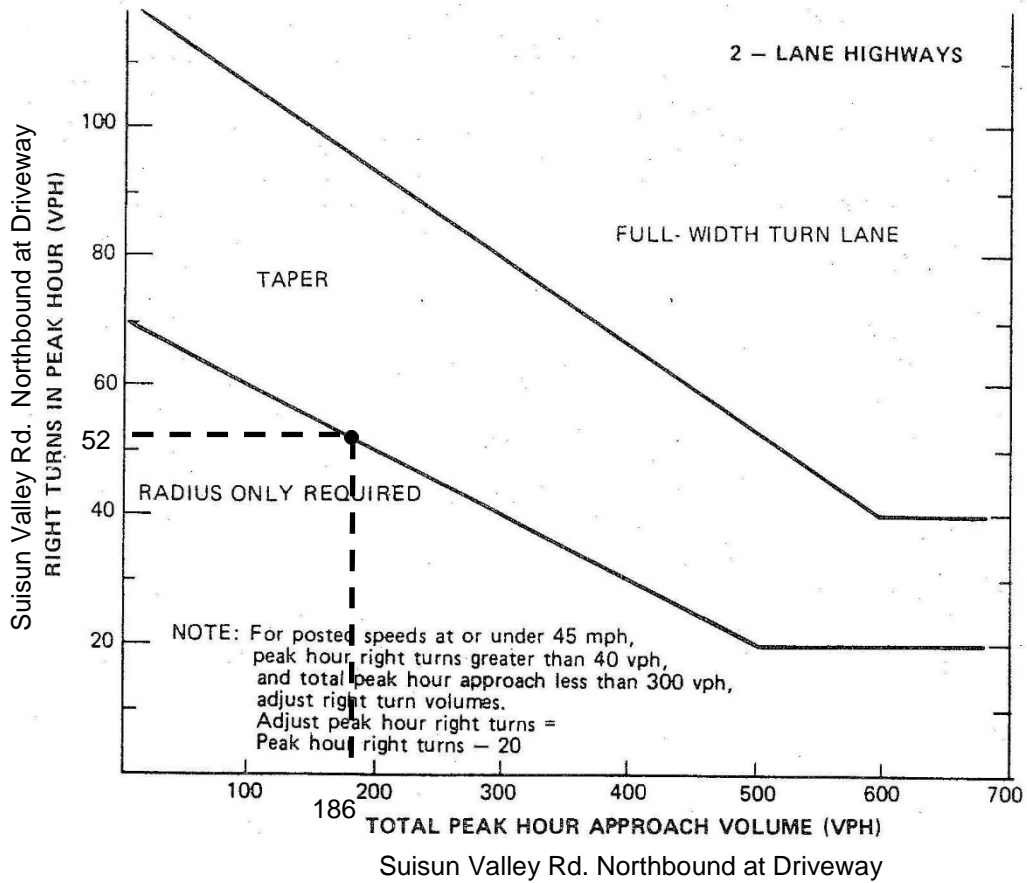
Suisun Valley Rd. / Driveway

CUMULATIVE + WEEKDAY MAXIMUM SIZE EVENT (61 CARS), BEFORE EVENT

$V_A = 251$        $L.T. \% = 9/251 = 4\%$        $V_O = 230$

LEFT TURN LANE NOT WARRANTED

## RIGHT TURN LANE WARRANTS



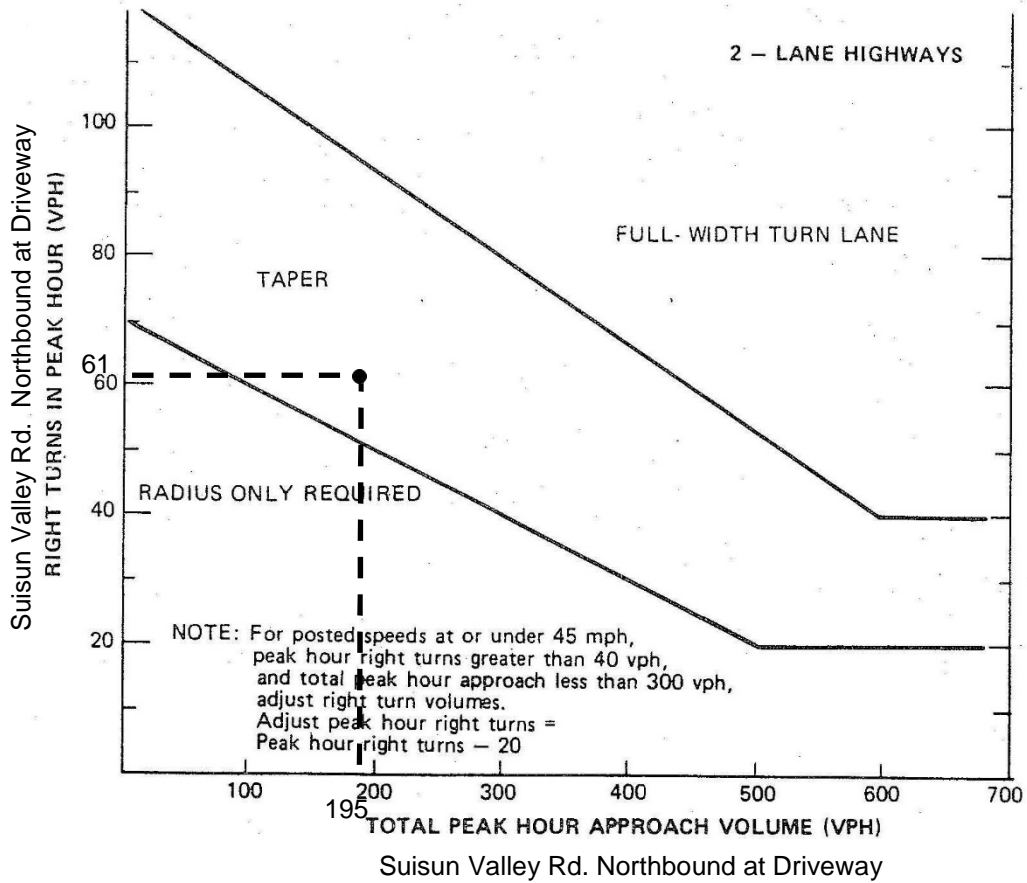
Monroe Ranch (Suisun Valley Inn) Event Barn Project

Suisun Valley Rd. / Driveway

EXISTING + WEEKEND WEDDING 150 GUESTS, BEFORE EVENT

RIGHT TURN TAPER MAY BE WARRANTED.

## RIGHT TURN LANE WARRANTS



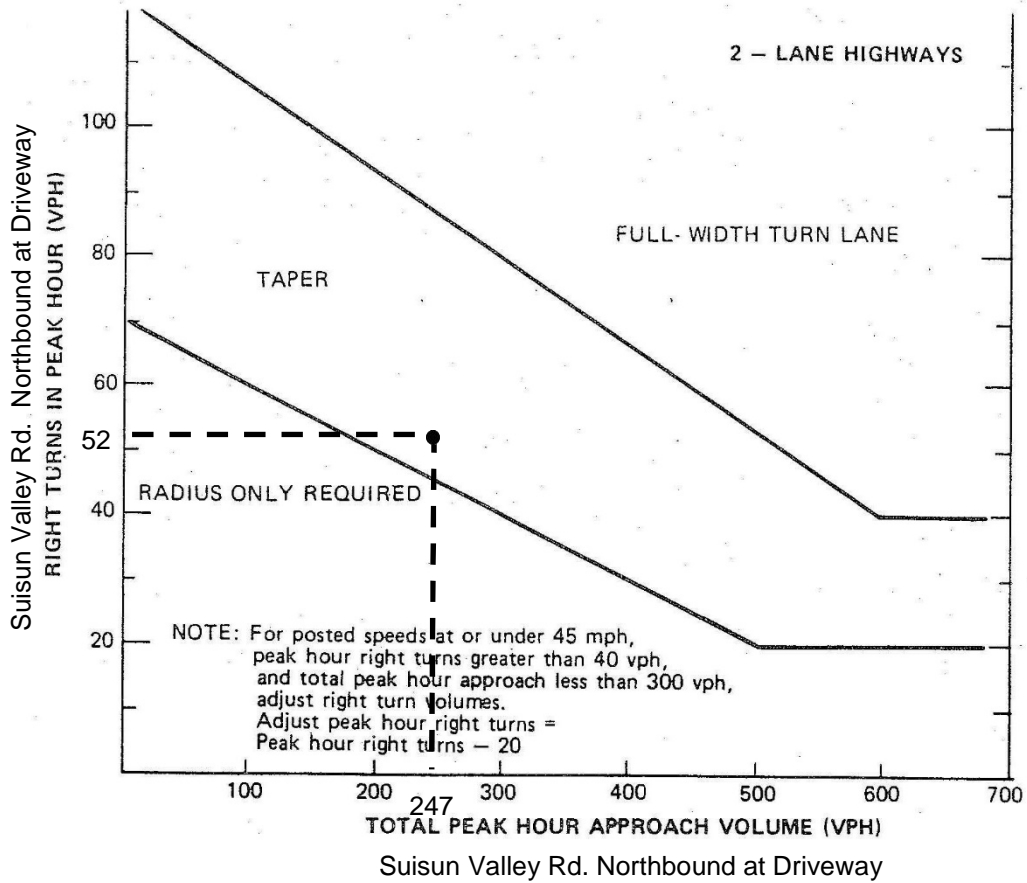
Monroe Ranch (Suisun Valley Inn) Event Barn Project

Suisun Valley Rd. / Driveway

EXISTING + WEEKEND WEDDING 250 GUESTS, BEFORE EVENT

RIGHT TURN TAPER MAY BE WARRANTED.

## RIGHT TURN LANE WARRANTS



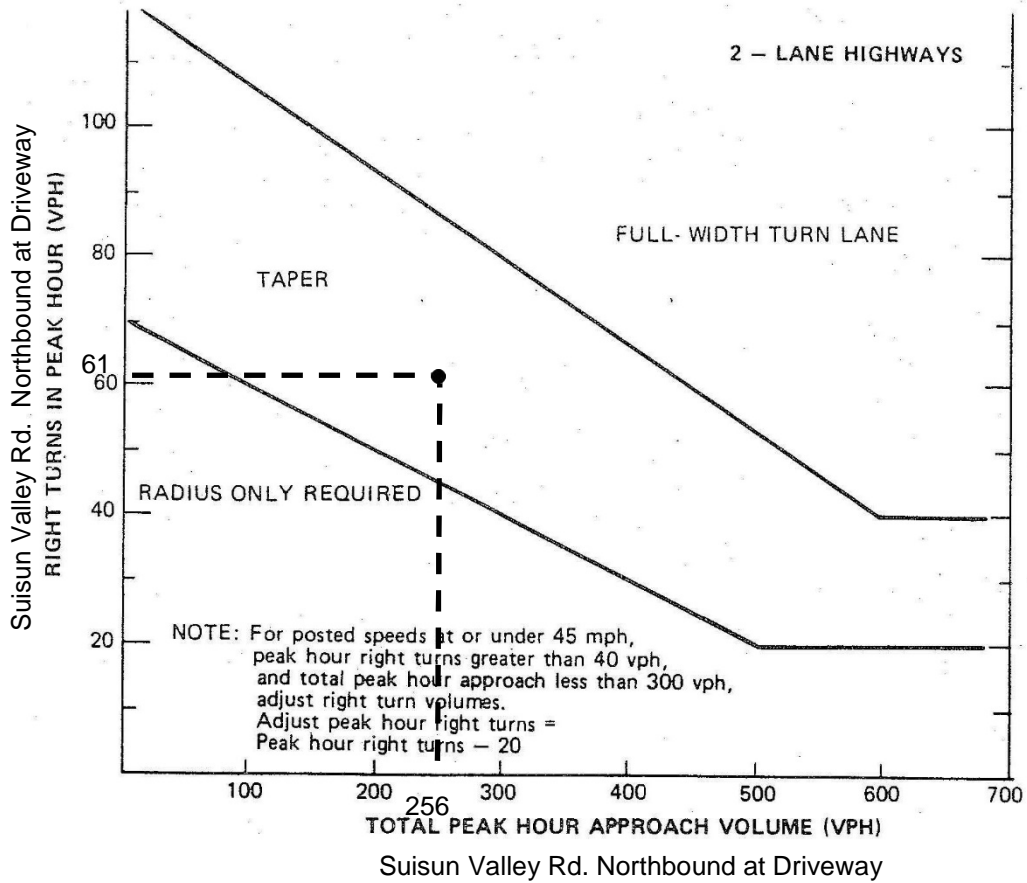
Monroe Ranch (Suisun Valley Inn) Event Barn Project

Suisun Valley Rd. / Driveway

CUMULATIVE + WEEKEND WEDDING 150 GUESTS, BEFORE EVENT

RIGHT TURN TAPER MAY BE WARRANTED.

## RIGHT TURN LANE WARRANTS



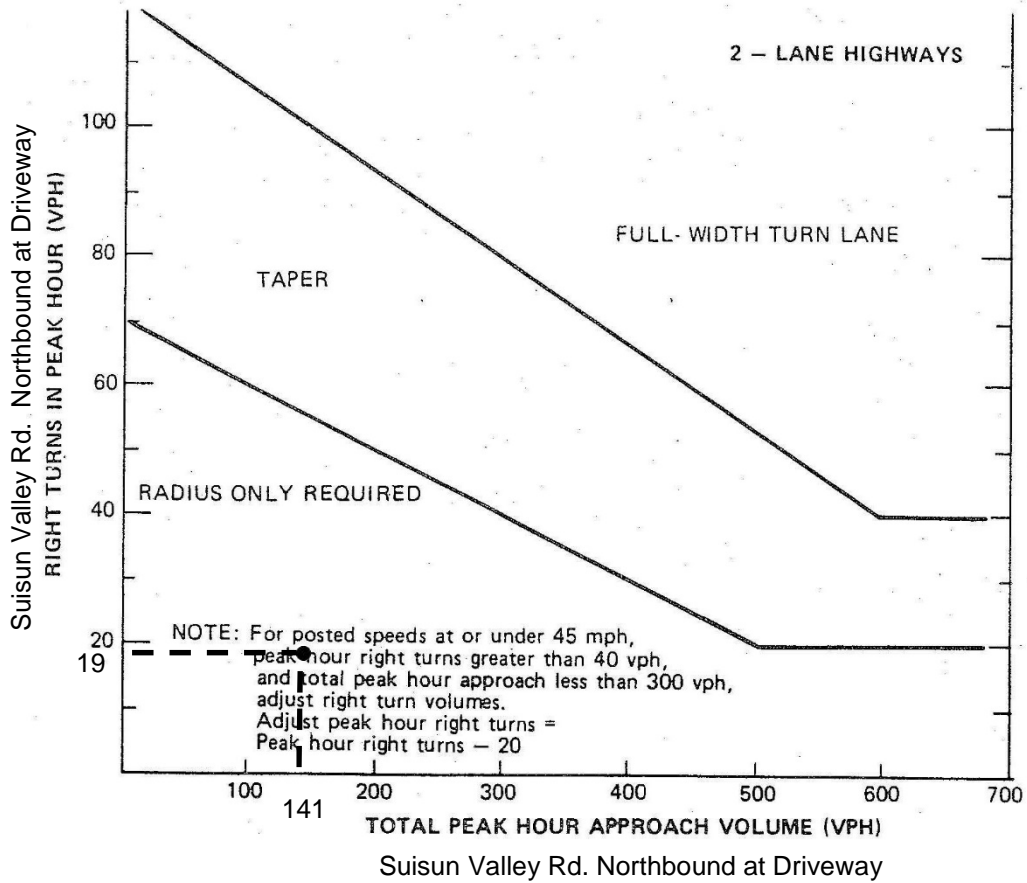
Monroe Ranch (Suisun Valley Inn) Event Barn Project

Suisun Valley Rd. / Driveway

CUMULATIVE + WEEKEND WEDDING 250 GUESTS, BEFORE EVENT

RIGHT TURN TAPER MAY BE WARRANTED.

## RIGHT TURN LANE WARRANTS



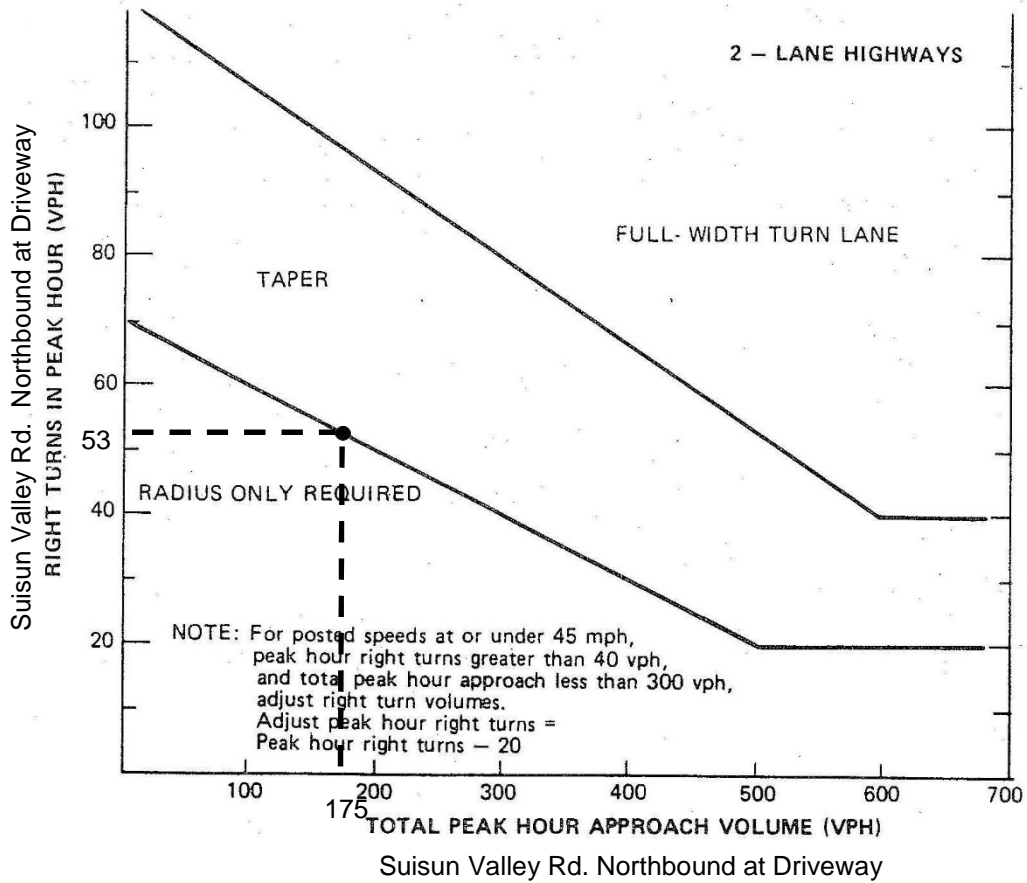
Monroe Ranch (Suisun Valley Inn) Event Barn Project

Suisun Valley Rd. / Driveway

EXISTING + WEEKDAY TYPICAL SIZE EVENT (21 CARS), BEFORE EVENT  
 RIGHT TURN LANE OR TAPER NOT WARRANTED.



## RIGHT TURN LANE WARRANTS

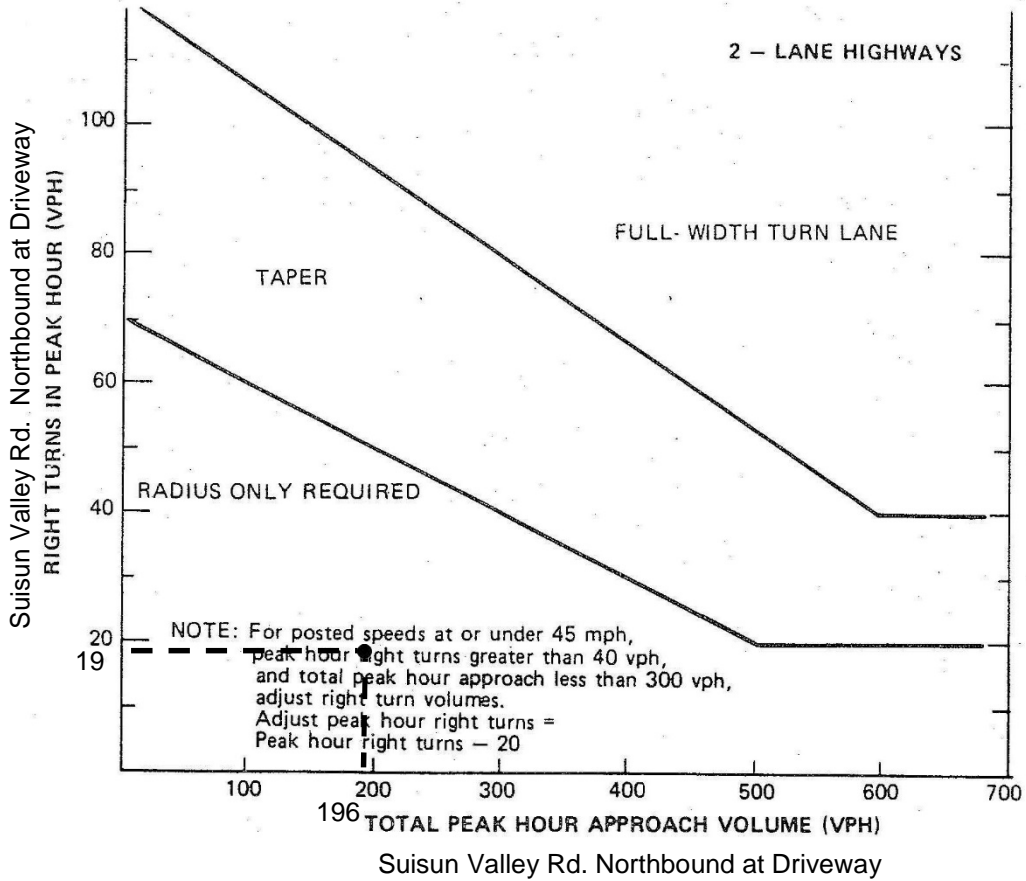


Monroe Ranch (Suisun Valley Inn) Event Barn Project

Suisun Valley Rd. / Driveway

EXISTING + WEEKDAY MAXIMUM SIZE EVENT (61 CARS), BEFORE EVENT  
 RIGHT TURN TAPER MAY BE WARRANTED.

## RIGHT TURN LANE WARRANTS

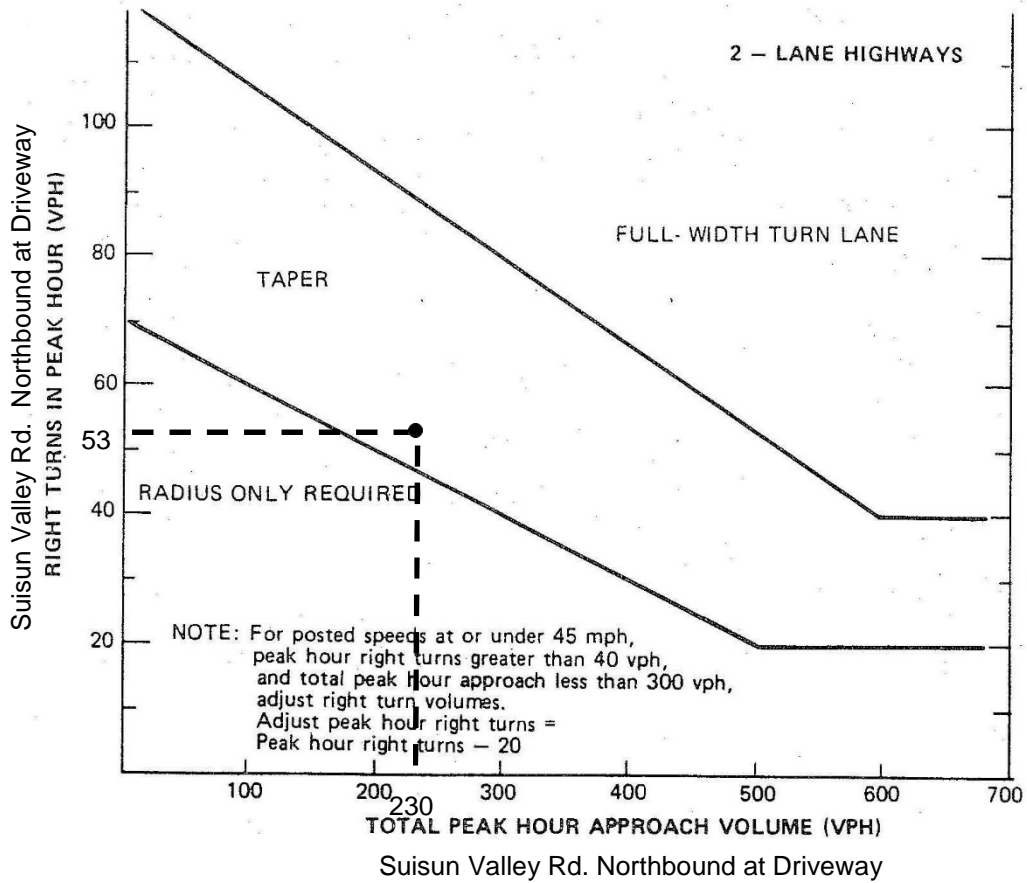


Monroe Ranch (Suisun Valley Inn) Event Barn Project

Suisun Valley Rd. / Driveway

CUMULATIVE + WEEKDAY TYPICAL SIZE EVENT (21 CARS), BEFORE EVENT  
 RIGHT TURN LANE OR TAPER NOT WARRANTED.

## RIGHT TURN LANE WARRANTS



Monroe Ranch (Suisun Valley Inn) Event Barn Project

Suisun Valley Rd. / Driveway

CUMULATIVE + WEEKDAY MAXIMUM SIZE EVENT (61 CARS), BEFORE EVENT  
 RIGHT TURN TAPER MAY BE WARRANTED.