



# COUNTY OF SONOMA

## PERMIT AND RESOURCE MANAGEMENT DEPARTMENT

2550 Ventura Avenue, Santa Rosa, CA 95403  
(707) 565-1900 FAX (707) 565-1103

August 5, 2014

To: Interested Agencies

The following application has been filed with the Sonoma County Permit and Resource Management Department.

**File Number:** PLP05-0009  
**Applicant Name:** Henry Belmonte  
**Owner Name:** Vittorio and Henry Belmonte  
**Site Address:** 9125 Highway 12, Kenwood  
**APN:** 050-275-028

**Project Description:** Request to modify previously approved Use Permit to change hours of operation, for the marketplace to allow it to be open from 10:00 a.m. to 5:00 p.m. Saturday through Thursday and 10:00 a.m. to 7:00 p.m. on Fridays and expand food service to allow restaurant during business hours.

We are submitting the above application for your review and recommendation. Additional information is on file in this office.

Responses to referrals should include: (1) statement of any environmental concerns or uncertainties your agency may have with the project; (2) any comments you wish to make regarding the merits of the project; and (3) your proposed conditions and mitigations for this project. Responsible agencies under CEQA are requested to indicate whether permits will be required for this project.

Your comments will be appreciated by August 26, 2014, and should be sent to the attention of:

**PLP05-0009, Greg Desmond (Gregory.Desmond@sonoma-county.org).** The Project Planner can also be reached at 707-565-1683.

Please send a copy of your comments to the applicant(s) or their representatives as indicated on the attached Planning Application.

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> PRMD County Surveyor              | <input type="checkbox"/> BOS Dist ____ Director                                   |
| <input type="checkbox"/> Health Specialist                            | <input checked="" type="checkbox"/> BOS Dist 1 Director and SVCAC                 |
| <input type="checkbox"/> Sanitation                                   | <input type="checkbox"/> BOS Dist 4 Director and Jason Liles                      |
| <input type="checkbox"/> Grading and Storm Water                      | <input checked="" type="checkbox"/> Valley of the Moon Alliance and Kenwood Press |
| <input type="checkbox"/> SUSMP  | <input type="checkbox"/> NW Information Center, S.S.U.                            |
| <input checked="" type="checkbox"/> Building Inspection               | <input type="checkbox"/> Milo Baker Chapter Conservation Committee                |
| <input type="checkbox"/> Code Enforcement                             | <input type="checkbox"/> PG&E   |
| <input type="checkbox"/> Road Naming                                  | <input type="checkbox"/> School District -  |
| <input checked="" type="checkbox"/> So County Environmental Health    | <input type="checkbox"/> Water District -   |
| <input checked="" type="checkbox"/> DTPW, Land Development            | <input checked="" type="checkbox"/> North Bay Corporation (Disposal)              |
| <input type="checkbox"/> DTPW, Drainage                               | <input type="checkbox"/> U.S. Army Corps of Engineers                             |
| <input type="checkbox"/> Ag Commissioner                              | <input type="checkbox"/> State Coastal Commission - Appealable Yes / No           |
| <input checked="" type="checkbox"/> Regional Parks Dept               | <input type="checkbox"/> State Dept of Transportation (Caltrans)                  |
| <input checked="" type="checkbox"/> Fire and Emergency Services       | <input type="checkbox"/> State Dept of Fish & Wildlife                            |
| <input checked="" type="checkbox"/> Local Fire District – KENWOOD FPD | <input type="checkbox"/> State Dept of Forestry                                   |
| <input type="checkbox"/> Treasurer/Special Assessment                 | <input checked="" type="checkbox"/> State Water Resources Control Board           |
| <input type="checkbox"/> Assessor                                     | <input type="checkbox"/> State Parks and Recreation                               |
| <input type="checkbox"/> Landmarks Commission                         | <input type="checkbox"/> Regional Water QCB: North Coast / SF Bay                 |
| <input checked="" type="checkbox"/> Transit/BPAC                      | <input type="checkbox"/> Air Pollution Control: No. So. County / Bay Area AQM     |
| <input type="checkbox"/> Communications                               | <input checked="" type="checkbox"/> Sonoma MOAG                                   |
| <input checked="" type="checkbox"/> SCTA/RCPA                         | <input checked="" type="checkbox"/> Oakmont Village Association                   |
| <input type="checkbox"/> Sheriff Community Service Officer            | <input checked="" type="checkbox"/> Federated Indians of Graton Rancheria         |
| <input type="checkbox"/> LAFCO  | <input checked="" type="checkbox"/> Kenwood Community Club                        |
| <input type="checkbox"/> ALUC/CLUP                                    |   |

# Planning Application

PJR-001

File#: \_\_\_\_\_

### Type of Application:

- |   |  |   |  |
|---|--|---|--|
| <input type="checkbox"/> Admin Cert. Compliance       | <input type="checkbox"/> Design Review Comm./Ind.  | <input type="checkbox"/> Minor Subdivision            | <input type="checkbox"/> Variance          |
| <input type="checkbox"/> Ag./Timber Preserve/Contract | <input type="checkbox"/> Design Review Residential | <input type="checkbox"/> Mobile Home Zoning Permit    | <input type="checkbox"/> Zone Change       |
| <input type="checkbox"/> Cert. of Compliance          | <input type="checkbox"/> Design Review Signs       | <input type="checkbox"/> Ordinance Interpretation     | <input checked="" type="checkbox"/> Other: |
| <input type="checkbox"/> Cert. of Modification        | <input type="checkbox"/> General Plan Amendment    | <input type="checkbox"/> Second Unit Permit           |  |
| <input type="checkbox"/> Coastal Permit               | <input type="checkbox"/> Lot Line Adjustment       | <input type="checkbox"/> Specific/Area Plan Amendment |  |
| <input type="checkbox"/> Design Review Admin.         | <input type="checkbox"/> Major Subdivision         | <input type="checkbox"/> Use Permit                   |  |

**USE PERMIT  
MODIFICATION**

### Applicant (Contact Person):

**Henry Belmonte**

Name

**Henry Belmonte**

Mailing Address

**60 Shaw Ave** Ca **95452**

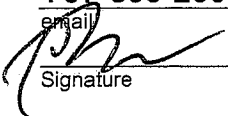
City/Town State Zip

**Kenwood**

Phone Fax

**707-833-2300 707-975-3991**

email



Signature

**6/25/14**  
Date

### Owner, if other than Applicant:

Name

Mailing Address

City/Town State Zip

Phone Fax

email

Signature Date

### Other Persons to be Notified: (Specify: Other Owner(s), Agent, Lender, Architect, Engineer, Surveyor)

Name	Name	Name
Mailing Address	Mailing Address	Mailing Address
City/Town State Zip	City/Town State Zip	City/Town State Zip
Title	Title	Title
Phone Fax	Phone Fax	Phone Fax
email	email	email

### Project Information:

**VJB Vineyards and Cellars**

Address(es) **60 Shaw Ave** **050-275-028** City/Town **Kenwood**

Assessor's Parcel Number(s) \_\_\_\_\_ Acreage \_\_\_\_\_

Project Description: **VJB Cellars is a tasting room and deli and marketplace**

(Please attach additional sheet(s) if needed)

Site Served by Public Water?  Yes  No Site Served by Public Sewer?  Yes  No Number of new lots proposed **n/a**

DO NOT WRITE BELOW THIS LINE - To Be Completed by PRMD Staff

Planning Area: **9** Supervisorial District: **1** Current Zoning: **C1, SR** General Plan Land Use: \_\_\_\_\_

Specific Plan: **North Sonoma Valley** S.P. Land Use: \_\_\_\_\_ Needs CEQA Review?  yes  no

Commercial/Industrial Uses: (Enter numbers where applicable)

Bldg. sq. ft. Existing: \_\_\_\_\_ Proposed: \_\_\_\_\_ Existing Employees: \_\_\_\_\_ New Employees: \_\_\_\_\_

New Manufactured Homes: \_\_\_\_\_ New Units For Sale: \_\_\_\_\_ New Units For Rent: \_\_\_\_\_ Density Bonus Units: \_\_\_\_\_

Violation?  yes  no; Application resolve planning violation?  yes  no; Penalty applicable?  yes  no; Civil Penalty Factor **N/A**

Previous Files: \_\_\_\_\_

Application accepted by **SCOTT HUNSPERGER** Date **7/11/14**

**Sonoma County Permit and Resource Management Department**  
2550 Ventura Avenue \* Santa Rosa, CA \* 95403-2829 \* (707) 565-1900 \* Fax (707) 565-1103

# Supplemental Application Information

Existing use of property: Winery tasting room, deli and marketplace

Acreage: 1.89

Existing structures on property: 4 existing dwellings that were permitted with construction permits.

Proximity to creeks, waterways and impoundment areas: none

Vegetation on site: vineyards

General topography: commercial, ag

Surrounding uses to (Note: An adjoining road is not a use.)  
North: vineyards and businesses South: vineyards and businesses  
East: residential West: vineyards and businesses

New structures proposed (size, height, type): to comply with department of health, our outdoor pizza and bbq area must be closed in "temporarily; only when prepping of food is taking place".

Number of employees: Full time: \_\_\_\_\_ Part time: \_\_\_\_\_ Seasonal: \_\_\_\_\_

Operating days: monday-sunday Hours of operation: 10am-4pm

Number of vehicles per day: Passenger: \_\_\_\_\_ Trucks: \_\_\_\_\_

Water source: Kenwood Water Co Sewage disposal: \_\_\_\_\_

Provider, if applicable: Kenwood Water Co Provider, if applicable: \_\_\_\_\_

New noise sources (compressors, power tools, music, etc.): none

Grading proposed: Amount of cut (cu. yds.): na Amount of fill (cu. yds.): na Will more than one acre be disturbed by construction of access roads, site preparation and clearing, fill or excavation, building removal, building construction, equipment staging and maintenance, or other activities? Yes \_\_\_\_\_ No X If Yes, indicate area of disturbance(acres): \_\_\_\_\_  
Identify method of site drainage (sheet flow, storm drain, outflow to creek or ditch, detention area, etc.): \_\_\_\_\_

Vegetation to be removed: none

Will proposal require annexation to a district in order to obtain public services: Yes \_\_\_\_\_ No X

Are there currently any hazardous materials (chemicals, oils, gasoline, etc.) stored, used or processed on this site? Yes \_\_\_\_\_ No X

Will the use, storage, or processing of hazardous materials occur on this site in the future if this project is authorized? Yes \_\_\_\_\_ No X

Fire safety information (existing/proposed water tanks, hydrants, emergency access and turnaround, building materials, etc): n/a

# Indemnification Agreement

PJR-011

"As part of this application, applicant agrees to defend, indemnify, release and hold harmless the County, its agents, officers, attorneys, employees, boards and commissions from any claim, action or proceeding brought against any of the foregoing individuals or entities, the purpose of which is to attack, set aside, void or annul the approval of this application or the adoption of the environmental document which accompanies it. This indemnification shall include, but not be limited to, damages, costs, expenses, attorney fees or expert witness fees that may be asserted by any person or entity, including the applicant, arising out of or in conjunction with the approval of this application, whether or not there is concurrent passive or active negligence on the part of the County. If, for any reason any portion of this indemnification agreement is held to be void or unenforceable by a court of competent jurisdiction, the remainder of the agreement shall remain in full force and effect."

**Henry Belmonte**

Applicant Name

Applicant Signature

**Henry Belmonte**

Owner Name

Owner Signature

**June 25, 2014**

Date

**PLP-05-0009**

File No.

NOTE: The purpose of the Indemnification Agreement is to allow the County to be held harmless in terms of potential legal costs and liabilities in conjunction with permit processing and approval.

**Sonoma County Permit and Resource Management Department**

2550 Ventura Avenue ❖ Santa Rosa, CA ❖ 95403-2829 ❖ (707) 565-1900 ❖ Fax (707) 565-1103

# At-Cost Project Reimbursement

PJR-095

PROJECT File: PLP-05-0009; request for \_\_\_\_\_

I, Harry Burmora, the undersigned, hereby authorize the County of Sonoma to process the above referenced permit request in accordance with the Sonoma County Code. I am depositing \$ 4,051 as a *minimum* deposit to pay for County staff review, coordination and processing costs related to my permit request based on actual staff time expended and other direct costs. **In making this deposit, I acknowledge and understand that the deposit may only cover a portion of the total processing costs. Actual costs for staff time are based on hourly rates adopted by the Board of Supervisors in the most current Sonoma County fee schedule. I also understand and agree that I am responsible for paying these costs even if the application is withdrawn or not approved.**

I understand and agree to the following terms and conditions of this Reimbursement Agreement:

1. Time spent by County of Sonoma staff in processing my application and any direct costs will be billed against the available deposit. **"Staff time" includes, but is not limited to, time spent reviewing application materials, site visits, responding by phone or correspondence to inquiries from the applicant, the applicant's representatives, neighbors and/or interested parties, attendance and participation at meetings and public hearings, preparation of staff reports and other correspondence, processing of any appeals, responding to public records act requests or responding to any legal challenges related to the application. "Staff" includes any employee of the Permit and Resource Management Department (PRMD), the Department of Transportation and Public Works and/or the Office of the County Counsel.**
2. Staff will review the application for completeness and provide me with a good faith estimate of the full cost of processing the permit. This good faith estimate will be included in an At-Cost Fee Agreement. The At-Cost Fee Agreement shall be signed by the party responsible for payment of fees, and the requested additional deposit shall be submitted to PRMD to allow continued processing of the project.
3. If processing costs exceed the available deposit, I will receive quarterly invoices payable within 30 days of billing.
4. I understand that the County desires to avoid incurring permit processing costs without having sufficient funds on deposit. If staff determines that inadequate funds are on deposit for continued processing, staff shall notify me in writing and request an additional deposit amount estimated necessary to complete processing of my application. I agree to submit sufficient funds as requested by staff to process the project through the hearing process within 30 days of the request.
5. If the final cost is less than any additional deposits requested by the County (deposits that exceed the initial minimum deposit described above), the unused portion of the additional deposit will be refunded to me within 60 days of final project action.
6. If the final cost is more than the available deposit, I agree to pay the difference within 30 days of billing.
7. If I fail to pay any invoices or requests for additional deposits within 30 days, the County may either stop processing my permit application, or after conducting a hearing, deny my permit application. If I fail to pay any invoices after my application is approved, I understand that my permit may not vest and may expire, or may be subject to revocation.

Sonoma County Permit and Resource Management Department

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8. If the County determines that any study submitted by the applicant requires a County-contracted consultant peer review, I will pay the actual cost of the consultant review. This cost may vary depending on the complexity of the analysis. Selection of any consultant for a peer review shall be at the sole discretion of the PRMD Director or his designee. The estimated cost of the peer review shall be paid prior to the County initiating any peer review by consultant.
9. I agree to pay the actual cost of any public notices for the project as required by State Law and Local Ordinance.
10. I may, in writing, request a further breakdown or itemization of invoices, but such a request does not alter my obligation to pay any invoices in accordance with the terms of this agreement.
11. I agree to pay all costs related to permit condition compliance as specified in any conditions of approval for my permit/entitlement.

**Note: This agreement does not include other agency review fees or the County Clerk Environmental Document filing fees.**

Name of Property Owner or Corporate Principal Responsible or Appointed Designee for Payment of all County Processing Fees *(Please Print)*:

*Harry Belmonte*

Name of Company or Corporation *(if applicable)*:

Mailing Address of the Property Owner or Corporation/Company responsible for paying processing fees:  
*If a Corporation, please attach a list of the names and titles of Corporate officers authorized to act on behalf of the Corporation*

Signature: *[Handwritten Signature]*

Date: *6/25/14*

Email Address: *hbelmonte@jbcclares.com*

Phone Number: *707-975-3991*

**\*ATTENTION - The property owner (or Corporate principal) will be held responsible for all charges.**



VJB

## Vineyards & Cellars

*"Quality above all else, tradition and family history will always prevail"*

– Victor Joseph Belmonte

June 25<sup>th</sup> 2014

Dean Parsons

Project Review Manager  
Sonoma County PRMD

Re: PLP05-0009 VJB Cellars and Marketplace-application for use permit modification

Dean,

Please find our proposed use permit modification statement per your email dated June 24<sup>th</sup>.

Food Service-Per our use permit we are permitted to have a marketplace and bbq offerings. **This has not changed.** We respectfully request the ability to offer pizzas from the wood burning oven (constructed with building permits) daily in conjunction with bbq food and the marketplace. Salumi and cheese boards are offered in the form of wine tasting as are all of our menu items. We have a number of different wine tasting scenarios that include food. I am including the "original" marketplace menu, that has NOT changed since final approval was given.

Food pairings and non-food pairings (such as guests buying just the salumi boards/cheese(s) or bbq items can enjoy them on the patio/piazza. We do not have "waiters/waitresses". Everything food related is self-serve unless a wine food pairing is taking place.

We are not conducting special events, there for no catered food is being offered.

Public Health-the Public Health Department has issued our facility the highest graded permit. They are also requiring that the outdoor bbq and pizza area be enclosed "when prepping of food takes place", **only when prepping of food takes place**, therefore when there is just bbq taking place, they can be opened again as we also do wine tasting at this outdoor bar area. We have proposed screens that can be adjusted automatically and can be placed so that when prepping of food is being conducted the screens can be lowered per the requirement of the Public Health and reopened when the process is finished to maintain the ecstatic integrity of the space.

Special Events-We understand and accept that special events cannot take place until the left hand turn lane is installed on Sonoma Hwy. There for until the left hand turn lane is installed we will not be holding special events. The traffic study submitted April 3, 2014 and reviewed that last time we met at Susan Gorin's office supports the that right hand turn lane is "not warranted". Jason Nutt of Public Works agreed and there for we will be relieved of that obligation.

Hours of Operation- The traffic study submitted April 3, 2014 supports that the tasting room continue to operate as indicated in our use permit from 10 am to 4 pm every day. This will not change.

We request a modification for the market place to be open until 5pm every day. The traffic study submitted April 3, 2014 supports this.

We request a modification for the market place to be open until 7pm on Friday. The traffic study submitted April 3, 2014 supports this.

Septic System-Dimension 4 submitted the analysis on April 25<sup>th</sup> 2014. I have included that again for your review. Essentially our system has been "over built", simply stated we aren't anywhere close to or might ever get to where the system becomes an issue given any usage of the property. The analysis also supports the new proposed hours of operation.

Parking Analysis-It has been determined and agreed that the Maple Street Gate being opened to existing traffic as evidenced in the traffic study submitted April 3, 2014 will assist our project with traffic flow. The ability to park on Shaw Ave adjacent to our project will also assist with our project as agreed upon by Public Works. Our current employees are parking at Wellington Winery, which we recently purchased approx. two miles away and are carpooling to the VJB location. The original use permit allowed for valet parking within vineyard rows, since we are not conducting special events these rows now( in between olive trees) have been converted to 11 additional hardscape customer parking stalls to assist with onsite parking.

I have also enclosed again the site plan developed by Fifth Resources.





dimensions  
4  
engineering  
inc

ANALYSIS  
PLANNING  
SURVEYING  
ENGINEERING

2952 Mendocino Avenue, Suite C  
Santa Rosa, California 95403

(Office) 707-578-3433  
(Fax) 707-526-3433

April 25, 2014

Henry and Vittorio Belmonte  
VJB Cellars  
60 Shaw Ave  
Kenwood, CA 95452

Subject: VJB Cellars  
60 Shaw Ave, Kenwood, CA  
Water Usage Study for Expanded Operating Hours

Dear Henry and Vittorio,

Per your request Dimensions 4 Engineering has reviewed water usage based on water meter billings from the Kenwood Water Company. Additionally we have compared water usage to the design capacity for the on-site septic system. Our findings and conclusions are as follows:

From the time period of April 2012 and January 2014, 50,008 gallons were used. Which is an average of 78 gallons per day over the course of 22 months. The highest water use occurred in the month of July 2013 with 3577 gallons, average 115 gallons per day. This does not give information regarding peak per day use which is used in design. We can assume that at 3577 gallons/month there would be 895 gallons/week and if perhaps that value came from 3 weekend days (Fri, Sat, Sun) the peak day flow would be 300 gallons. We know that the facility is open 7 days a week so this would be a conservative approach.

The implemented pressure distributed system was designed for 540 gallons per day. The old existing standard system has a capacity of 300 gallons per day. This means the total capacity for the property is 840 gallons per day. The conservatively assumed peak flows are merely 1/3 of the designed capacity.

Extending the hours of operation from 7 hours per day to 9 hours per day or in other terms from 49 hours a week to 63 hours per week is a 29% increase in operating hours. If you assumed a 29% increase in peak flow, for 9 hours of operation peak flow could possibly be as high as 387 gallons per day. Still only 1/2 of the designed capacity.

Thinking not of peak daily flow, but of average daily flow which is 78 gallons per day based on water meter readings. This is less than 10% of design capacity. Thus a 29%

increase in average daily flow would be 100 gallons per day, approximately 12% of design capacity.

Thank you,

DIMENSIONS 4 ENGINEERING, INC.

By: Samual Edwards  
Sam Edwards, EIT

By: Dan Wright  
Dan Wright, RCE



cc: File



April 3, 2014

Mr. Henry R. Belmonte  
VJB Vineyards & Cellars  
60 Shaw Avenue  
Kenwood, CA 95452

Whitlock & Weinberger  
Transportation, Inc.

490 Mendocino Avenue  
Suite 201  
Santa Rosa, CA 95401

voice 707.542.9500  
fax 707.542.9590  
web [www.w-trans.com](http://www.w-trans.com)

## **Focused Traffic Analysis for the VJB Marketplace Modification**

Dear Mr. Belmonte;

As requested, Whitlock & Weinberger Transportation, Inc. (W-Trans) has performed a focused traffic analysis that addresses the proposed changes to the Use Permit for VJB Marketplace located at 60 Shaw Avenue in the Kenwood area of the County of Sonoma. The study of weekday p.m. peak period traffic impacts was completed in accordance with standard criteria, and is consistent with previous analyses and standard traffic engineering techniques.

### **Proposed Use Permit**

VJB Marketplace is located at 60 Shaw Avenue near its intersection with State Route 12 (SR 12). Access to the winery, tasting room and marketplace/deli is provided via a driveway on Shaw Avenue, approximately 250 feet west of SR 12. The site is served by a parking lot with 19 spaces plus two ADA-compliant spaces. There is a secondary access with a locked gate at Maple Avenue, approximately 250 feet west of SR 12.

The project is a proposed change to the Use Permit which would include the following:

- Marketplace/deli hours which currently end at 4:00 would be extended to 5:00 p.m. all week except that on Fridays it would remain open until 7:00 p.m.
- Tasting Room hours which currently end at 4:00 would maintain the same operating hours.
- The vehicle gate at Maple Avenue would be opened.
- Payment would be made to the Sonoma County Transportation & Public Works Department for contribution towards installation of a left-turn lane on SR 12.

### **Study Area**

The study area includes the two intersections on SR 12 at Shaw Avenue and Maple Avenue.

- SR 12/Shaw Avenue
- SR 12/Maple Avenue

### Traffic Operation Standards

The County's Level of Service standard for intersections is Level of Service D. The project would have a significant traffic impact if the project's traffic would cause an intersection currently operating at an acceptable level of service (LOS D or better) to operate below the standard (LOS E or F). If the intersection currently operates or is projected to operate below the County standard (at LOS E or F), the project's impact is significant if it causes the average delay for any critical movement to increase by five seconds or more. The delay is determined by comparing intersection operation with and without the project's traffic for both the existing baseline and projected future conditions. These criteria apply to all controlled or uncontrolled intersections with projected traffic volumes that exceed 30 vehicles per hour per approach or per exclusive left turn movement.

### Existing Conditions

#### Corridor Conditions

The community of Kenwood is located approximately 10 miles east of the City of Santa Rosa on SR 12. In the vicinity of the proposed project SR 12 is a two-lane road running in a north-south alignment with narrow shoulders and a posted speed limit of 45 miles per hour (mph). Published traffic volumes from 2011 provided by Caltrans indicate an average daily volume of approximately 16,000 vehicles per day. There is an existing center/left-turn lane on SR 12 for 350-foot distance in the area of Randolph Avenue, north of VJB. Shaw Avenue and Maple Avenue have posted speed limits of 25 mph and are unimproved residential two-lane roads with limited room for parking on the shoulders.

#### Intersection Level of Service

Intersection turning movement counts were collected at the two study intersections on May 9, 2013. Based on these traffic counts, both intersections are operating acceptably at LOS A overall. The Shaw Avenue approach to SR 12 is operating at LOS D and the Maple Avenue approach at LOS C. Results are shown in Table I and the calculations are enclosed.

**Table I**  
**Existing and Existing plus Project PM Peak Hour Intersection Levels of Service**

Study Intersection Approach	Existing Conditions		Existing plus Project	
	Delay	LOS	Delay	LOS
1. Shaw Ave/Sonoma Hwy	0.3	A	0.4	A
<i>Eastbound approach</i>	<i>26.0</i>	<i>D</i>	<i>29.0</i>	<i>D</i>
2. Maple Ave/Sonoma Hwy	0.1	A	0.1	A
<i>Eastbound approach</i>	<i>24.5</i>	<i>C</i>	<i>23.4</i>	<i>C</i>

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service;  
Results for the stop-controlled minor approaches are indicated in italics

#### Turn Lane Warrants

The need for a left-turn and/or right-turn lane on SR 12 was evaluated based on criteria contained in the *Intersection Channelization Design Guide*, National Cooperative Highway Research Program (NCHRP)

Report No. 279, Transportation Research Board, 1985. Considering existing traffic volumes, left-turn lanes are warranted at both Shaw Avenue and Maple Avenue, although the volume of left-turn movements during the p.m. peak hour is only six vehicles and two vehicles, respectively. A right-turn lane on SR 12 was not found to be warranted at either location. Copies of the spreadsheets indicating the turn lane warrants are enclosed. It should be noted that the need for additional turn lanes on the Shaw Avenue and Maple Avenue approaches to SR 12 are assessed based on level of service conditions rather than these warrants.

### Project Traffic

Although the Marketplace and Tasting Room at VJB are currently in operation, both uses close at 4:00 p.m. so do not impact traffic conditions during the traditional weekday p.m. peak hour. In order to assess the impacts of extending the hours of both of these uses, new vehicle trips were estimated. For the purpose of estimating the number of new trips which the proposed project can be expected to generate, *Trip Generation Manual*, 9<sup>th</sup> Edition, Institute of Transportation Engineers, 2012, was used. For the tasting room, the ITE rate for a "drinking place" was used. For the marketplace/deli, the ITE rate for a "Quality Restaurant" was used.

As shown in Table 2, the proposed change to the use permit is expected to generate an average of 17 new vehicle trips during the p.m. peak hour.

**Table 2**  
**Trip Generation Summary**

Land Use	Units	PM Peak			
		Rate	Trips	In	Out
Tasting Room	0.9 ksf	7.48	10	7	3
Marketplace (ITE #150)	0.9 ksf	5.02	7	5	2
<b>Total</b>			<b>17</b>	<b>12</b>	<b>5</b>

Note: ksf = thousand square feet

### Existing plus Project Conditions

#### Intersection Level of Service

With the addition of project trips, both intersections would continue to operate acceptably at LOS A overall. Both side street approaches on Shaw Avenue and Maple Avenue would continue to operate at LOS D and C, respectively, representing an acceptable impact. These acceptable level of service conditions indicate that no turn lane expansions are necessary on the Shaw Avenue and Maple Avenue approaches to SR 12. Results are shown in Table 1 and the calculations are attached.

#### Turn Lane Warrants

The need for right-turn lanes on SR 12 was evaluated for Existing plus Project conditions. Left-turn lanes are currently warranted at both SR 12/Shaw Avenue and SR 12/Maple Avenue. A right-turn lane on SR 12 will not be warranted with the addition of the project traffic volumes. Copies of the spreadsheets indicating the turn lane warrants are enclosed.

**Back Gate to Maple Avenue**

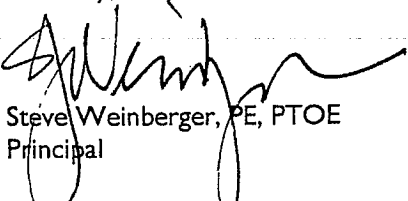
Based on a review of the area circulation, it is recommended that the back gate on Maple Avenue at VJB remain open during business hours for both inbound and outbound traffic. This opening would help to spread the traffic demand to two streets rather than one and would allow greater flexibility in gaining access to and departing from the site. It would also reduce any traffic impacts to neighboring streets when traffic turns onto Maple Avenue rather than Shaw Avenue.

**Summary and Recommendations**

- Both study intersections are operating at acceptable levels of service under Existing Conditions and are expected to continue operating acceptably with the addition of project-generated traffic.
- With acceptable level of service conditions on the stop controlled approaches under both Existing and Existing plus Project conditions, no turn lane expansions are necessary on the Shaw Avenue and Maple Avenue approaches to SR 12.
- The need for a right-turn lane on SR 12 was evaluated under Existing and Existing plus Project conditions for both study intersections. Under both Existing and Existing plus Project conditions, a right-turn lane on SR 12 is not warranted for either of the study intersections.
- The need for a left-turn lane on SR 12 was evaluated under Existing and Existing plus Project conditions for both study intersections. Under Existing conditions, a left-turn lane is warranted at both study intersections. Therefore, the turn lane is also warranted under any future conditions.
- It is recommended that VJB pay a contribution towards future construction of left-turn lanes on SR 12.
- It is recommended that the back gate at VJB remain open during business hours for both inbound and outbound traffic to provide greater access flexibility and also reduce any traffic impacts to neighboring streets when traffic turns onto Maple Avenue rather than Shaw Avenue.

If you have any questions regarding this analysis, please give me a call.

Sincerely,

  
Steve Weinberger, PE, PTOE  
Principal

Enclosures: LOS Calculations  
Turn Lane Warrants



SJW/sjw/SOX227.L3

Copy: Jim Ford, The Fifth Resource (via email)

PM Peak Hour - Existing Conditions  
Traffic Study for the VJB Marketplace Project  
County of Sonoma

Level Of Service Computation Report  
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 SR 12/Shaw Ave  
Average Delay (sec/veh): 0.3 Worst Case Level Of Service: D [ 26.0]  
Street Name: SR 12 Shaw Ave  
Approach: North Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R  
Control: Uncontrolled Uncontrolled Uncontrolled Stop Sign  
Rights: Include Include Include  
Lanes: 0 1 0 0 0 0 0 1 0 0 0 1 0 0 0 0 0 0 0

Volume Module: >> Count Date: 9 May 2013 << 4:15 - 5:15 pm  
Base Vol: 6 891 0 0 533 4 6 0 7 0 0 0 0  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 6 891 0 0 533 4 6 0 7 0 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93  
PHF Volume: 6 954 0 0 578 4 6 0 7 0 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 6 954 0 0 578 4 6 0 7 0 0 0 0

Critical Gap Module:  
Critical Gap: 4.1 xxxxx xxxxx xxxxx xxxxx 6.4 6.5 6.2 xxxxx xxxxx xxxxx  
FollowUpTim: 2.2 xxxxx xxxxx xxxxx xxxxx 3.5 4.0 3.3 xxxxx xxxxx xxxxx

Capacity Module:  
Conflict Vol: 682 xxxxx xxxxx xxxxx xxxxx 1647 1647 680 xxxxx xxxxx xxxxx  
Potential Cap: 920 xxxxx xxxxx xxxxx xxxxx 110 100 455 xxxxx xxxxx xxxxx  
Move Cap.: 920 xxxxx xxxxx xxxxx xxxxx 110 100 455 xxxxx xxxxx xxxxx  
Volume/Cap: 0.01 xxxxx xxxxx xxxxx xxxxx 0.06 0.00 0.02 xxxxx xxxxx xxxxx

Level Of Service Module:  
2Way95thQ: 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Control Del: 8.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
LOS by Move: A \* \* \* \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx 186 xxxxx xxxxx xxxxx  
SharedQueue: 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx 0.2 xxxxx xxxxx xxxxx  
Shrd ComDel: 8.9 xxxxx xxxxx xxxxx xxxxx xxxxx 26.0 xxxxx xxxxx xxxxx  
Shared LOS: A \* \* \* \* \* D \* \* \* \* \*  
ApproachDel: xxxxxx \* xxxxxx \*  
ApproachLOS: \* \* \* \* \*  
Note: Queue reported is the number of cars per lane.

PM Peak Hour - Existing Conditions  
Traffic Study for the VJB Marketplace Project  
County of Sonoma

Level Of Service Computation Report  
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 SR 12/Maple Ave  
Average Delay (sec/veh): 0.1 Worst Case Level Of Service: C [ 24.5]  
Street Name: SR 12 Maple Ave  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
Control: Uncontrolled Uncontrolled Uncontrolled Stop Sign  
Rights: Include Include Include  
Lanes: 0 1 0 0 0 0 0 1 0 0 0 1 0 0 0 0 0 0 0

Volume Module: >> Count Date: 9 May 2013 << 4:15 - 5:15 pm  
Base Vol: 2 897 0 0 640 12 3 0 4 0 0 0 0  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 2 897 0 0 640 12 3 0 4 0 0 0 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93  
PHF Volume: 2 960 0 0 685 13 3 0 4 0 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 2 960 0 0 685 13 3 0 4 0 0 0 0

Critical Gap Module:  
Critical Gap: 4.1 xxxxx xxxxx xxxxx xxxxx 6.4 6.5 6.2 xxxxx xxxxx xxxxx  
FollowUpTim: 2.2 xxxxx xxxxx xxxxx xxxxx 3.5 4.0 3.3 xxxxx xxxxx xxxxx

Capacity Module:  
Conflict Vol: 698 xxxxx xxxxx xxxxx xxxxx 1656 1656 692 xxxxx xxxxx xxxxx  
Potential Cap: 908 xxxxx xxxxx xxxxx xxxxx 109 99 448 xxxxx xxxxx xxxxx  
Move Cap.: 908 xxxxx xxxxx xxxxx xxxxx 109 99 448 xxxxx xxxxx xxxxx  
Volume/Cap: 0.00 xxxxx xxxxx xxxxx xxxxx 0.03 0.00 0.01 xxxxx xxxxx xxxxx

Level Of Service Module:  
2Way95thQ: 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
Control Del: 9.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
LOS by Move: A \* \* \* \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 192 xxxxx xxxxx  
SharedQueue: 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx 0.1 xxxxx xxxxx xxxxx  
Shrd ComDel: 9.0 xxxxx xxxxx xxxxx xxxxx xxxxx 24.5 xxxxx xxxxx xxxxx  
Shared LOS: A \* \* \* \* \* C \* \* \* \* \*  
ApproachDel: xxxxxx \* xxxxxx \*  
ApproachLOS: \* \* \* \* \*  
Note: Queue reported is the number of cars per lane.

PM Peak Hour - Existing plus Project Conditions
Traffic Study for the VJB Marketplace Project
County of Sonoma

PM Peak Hour - Existing plus Project Conditions
Traffic Study for the VJB Marketplace Project
County of Sonoma

Level of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)
Intersection #1 SR 12/Shaw Ave
Average Delay (sec/veh): 0.4 Worst Case Level of Service: D [ 29.0 ]
Street Name: SR 12 Shaw Ave
Approach: North Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 1 0 0 0 0 0 1 0 0 0 0 1 0 0 0 0 0 0 0
Volume Module: >> Count Date: 9 May 2013 << 4:15 - 5:15 pm
Base Vol: 6 891 0 0 633 4 6 0 0 7 0 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 6 891 0 0 633 4 6 0 0 7 0 0 0 0
Added Vol: 3 0 0 0 0 6 3 0 0 1 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 9 891 0 0 633 10 9 0 0 8 0 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93
PHF Volume: 10 954 0 0 678 11 10 0 0 9 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 10 954 0 0 678 11 10 0 0 9 0 0 0 0
Critical Gap Module:
Critical Gap: 4.1 xxxxx xxxxx xxxxx xxxxx 6.4 6.5 6.2 xxxxx xxxxx xxxxx
FollowUpTim: 2.2 xxxxx xxxxx xxxxx xxxxx 3.5 4.0 3.3 xxxxx xxxxx xxxxx
Capacity Module:
Conflict Vol: 688 xxxxx xxxxx xxxxx xxxxx 1656 1656 683 xxxxx xxxxx xxxxx
Potential Cap.: 915 xxxxx xxxxx xxxxx xxxxx 109 99 453 xxxxx xxxxx xxxxx
Move Cap.: 915 xxxxx xxxxx xxxxx xxxxx 108 98 453 xxxxx xxxxx xxxxx
Volume/Cap: 0.01 xxxxx xxxxx xxxxx xxxxx 0.09 0.00 0.02 xxxxx xxxxx xxxxx
Level of Service Module:
2Way95thQ: 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del: 9.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: A \* \* \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 168 xxxxx xxxxx xxxxx xxxxx
SharedQueue: 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx 0.4 xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: 9.0 xxxxx xxxxx xxxxx xxxxx xxxxx 29.0 xxxxx xxxxx xxxxx xxxxx
Shared LOS: A \* \* \* \* \* D \* \* \* \* \*
ApproachDel: xxxxxx 29.0 \* \* \* \* \*
ApproachLOS: \* \* \* \* \*
\*\*\*\*\*
Note: Queue reported is the number of cars per lane.
\*\*\*\*\*

Level of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)
Intersection #2 SR 12/Maple Ave
Average Delay (sec/veh): 0.1 Worst Case Level of Service: C [ 23.4 ]
Street Name: SR 12 Maple Ave
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 1 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0
Volume Module: >> Count Date: 9 May 2013 << 4:15 - 5:15 pm
Base Vol: 2 897 0 0 640 12 3 0 0 4 0 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 2 897 0 0 640 12 3 0 0 4 0 0 0 0
Added Vol: 3 3 0 0 0 1 0 0 0 0 1 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 5 900 0 0 641 12 3 0 0 5 0 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93
PHF Volume: 5 964 0 0 686 13 3 0 0 5 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 5 964 0 0 686 13 3 0 0 5 0 0 0 0
Critical Gap Module:
Critical Gap: 4.1 xxxxx xxxxx xxxxx xxxxx 6.4 6.5 6.2 xxxxx xxxxx xxxxx
FollowUpTim: 2.2 xxxxx xxxxx xxxxx xxxxx 3.5 4.0 3.3 xxxxx xxxxx xxxxx
Capacity Module:
Conflict Vol: 699 xxxxx xxxxx xxxxx xxxxx 1667 1667 693 xxxxx xxxxx xxxxx
Potential Cap.: 907 xxxxx xxxxx xxxxx xxxxx 107 97 447 xxxxx xxxxx xxxxx
Move Cap.: 907 xxxxx xxxxx xxxxx xxxxx 107 97 447 xxxxx xxxxx xxxxx
Volume/Cap: 0.01 xxxxx xxxxx xxxxx xxxxx 0.03 0.00 0.01 xxxxx xxxxx xxxxx
Level of Service Module:
2Way95thQ: 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del: 9.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: A \* \* \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 204 xxxxx xxxxx xxxxx xxxxx
SharedQueue: 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx 0.1 xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: 9.0 xxxxx xxxxx xxxxx xxxxx xxxxx 23.4 xxxxx xxxxx xxxxx xxxxx
Shared LOS: A \* \* \* \* \* C \* \* \* \* \*
ApproachDel: xxxxxx 23.4 \* \* \* \* \*
ApproachLOS: \* \* \* \* \*
\*\*\*\*\*
Note: Queue reported is the number of cars per lane.
\*\*\*\*\*

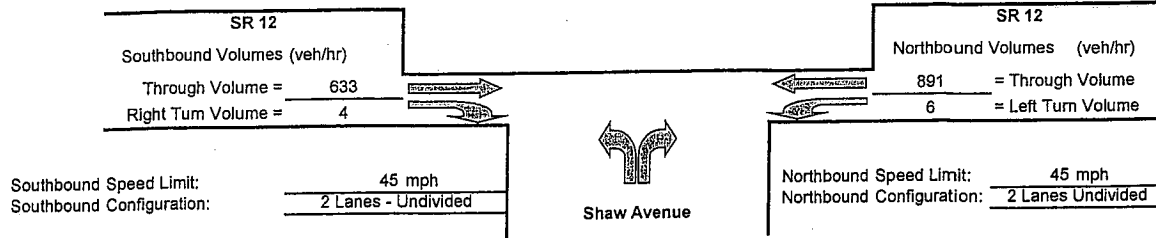


# Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: SR 12/Shaw Avenue  
 Study Scenario: Existing PM Peak Hour

Direction of Analysis Street: North/South

Cross Street Intersects: From the West



### Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

**NOT WARRANTED** Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold AV = -  
 Advancing Volume Va = 637  
 If AV < Va then warrant is met -

**Right Turn Lane Warranted:** NO

### Southbound Right Turn Taper Warrants (evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

**NOT WARRANTED** Less than 20 vehicles

2. Check advance volume threshold criteria for taper

Advancing Volume Threshold AV = -  
 Advancing Volume Va = 637  
 If AV < Va then warrant is met -

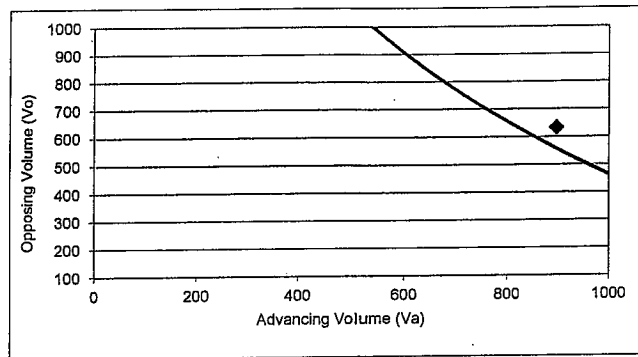
**Right Turn Taper Warranted:** NO

### Northbound Left Turn Lane Warrants

Percentage Left Turns %t 0.7 %

Advancing Volume Threshold AV 822 veh/hr

If AV < Va then warrant is met



◆ Study Intersection  
 Two lane roadway warrant threshold for: 45 mph  
 Turn lane warranted if point falls to right of warrant threshold line

**Left Turn Lane Warranted:** YES

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.

The right turn lane and taper analysis is based on work conducted by Cottrill in 1981.

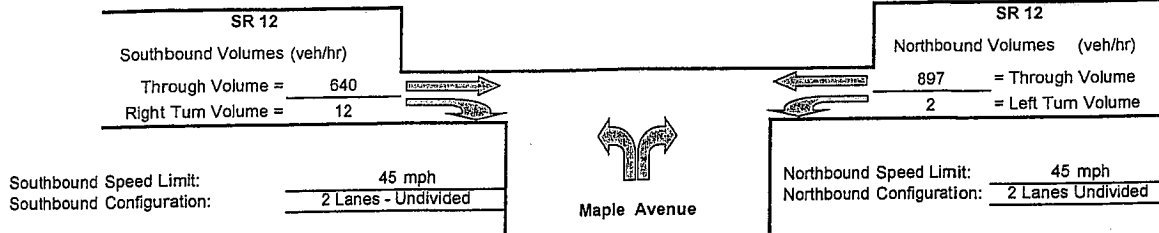
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakraborty in 1991.

# Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: SR 12/Maple Avenue  
 Study Scenario: Existing PM Peak Hour

Direction of Analysis Street: North/South

Cross Street Intersects: From the West



### Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

**NOT WARRANTED - Less than 40 vehicles**

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold AV = -  
 Advancing Volume Va = 652  
 If  $AV < Va$  then warrant is met -

**Right Turn Lane Warranted: NO**

### Southbound Right Turn Taper Warrants

(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

**NOT WARRANTED - Less than 20 vehicles**

2. Check advance volume threshold criteria for taper

Advancing Volume Threshold AV = -  
 Advancing Volume Va = 652  
 If  $AV < Va$  then warrant is met -

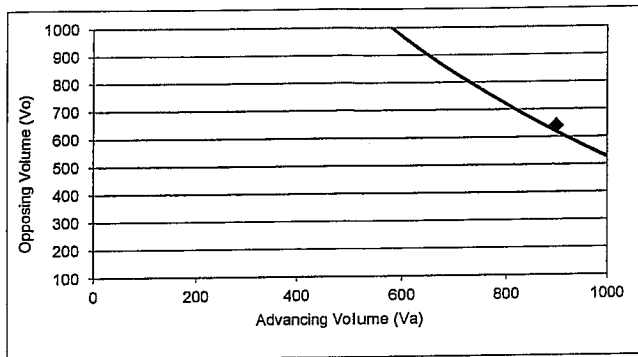
**Right Turn Taper Warranted: NO**

### Northbound Left Turn Lane Warrants

Percentage Left Turns %lt 0.2 %

Advancing Volume Threshold AV 877 veh/hr

If  $AV < Va$  then warrant is met



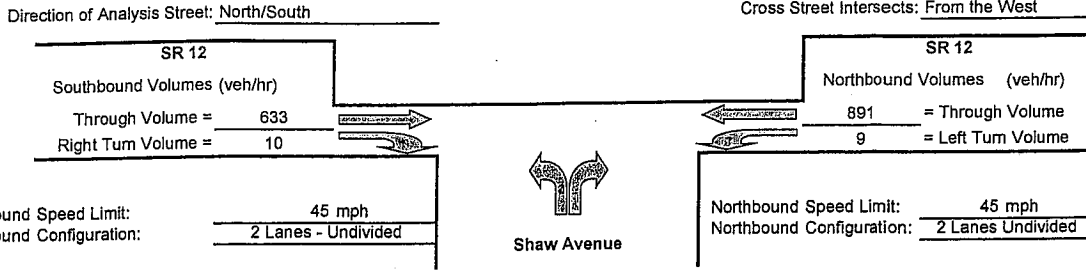
◆ Study Intersection  
 Two lane roadway warrant threshold for: 45 mph  
 Turn lane warranted if point falls to right of warrant threshold line

**Left Turn Lane Warranted: YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.  
 The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.  
 The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

# Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: SR 12/Shaw Avenue  
 Study Scenario: Existing plus Project PM Peak Hour



### Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

**NOT WARRANTED - Less than 40 vehicles**

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold AV = -  
 Advancing Volume Va = 643  
 If  $AV < Va$  then warrant is met -

**Right Turn Lane Warranted: NO**

### Southbound Right Turn Taper Warrants (evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

**NOT WARRANTED - Less than 20 vehicles**

2. Check advance volume threshold criteria for taper

Advancing Volume Threshold AV = -  
 Advancing Volume Va = 643  
 If  $AV < Va$  then warrant is met -

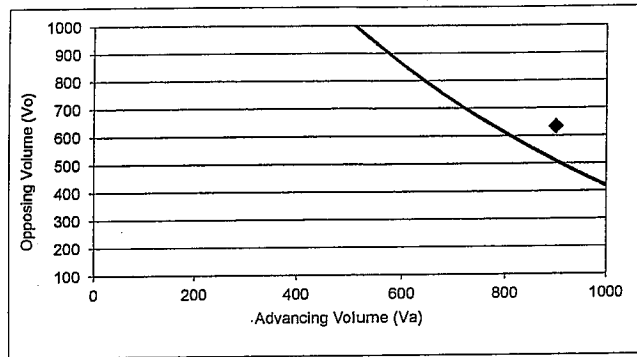
**Right Turn Taper Warranted: NO**

### Northbound Left Turn Lane Warrants

Percentage Left Turns %t 1.0 %

Advancing Volume Threshold AV 780 veh/hr

If  $AV < Va$  then warrant is met



◆ Study Intersection  
 Two lane roadway warrant threshold for: 45 mph  
 Turn lane warranted if point falls to right of warrant threshold line

**Left Turn Lane Warranted: YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.

The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.

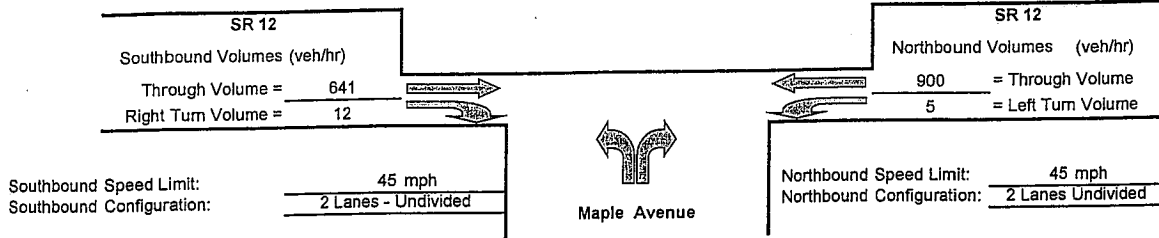
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakraborty in 1991.

# Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: SR 12/Maple Avenue  
 Study Scenario: Existing plus Project PM Peak Hour

Direction of Analysis Street: North/South

Cross Street Intersects: From the West



### Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

**NOT WARRANTED - Less than 40 vehicles**

2. Check advance volume threshold criteria for turn lane
 

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	653
If $AV < Va$ then warrant is met		

**Right Turn Lane Warranted: NO**

### Southbound Right Turn Taper Warrants (evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

**NOT WARRANTED - Less than 20 vehicles**

2. Check advance volume threshold criteria for taper
 

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	653
If $AV < Va$ then warrant is met		

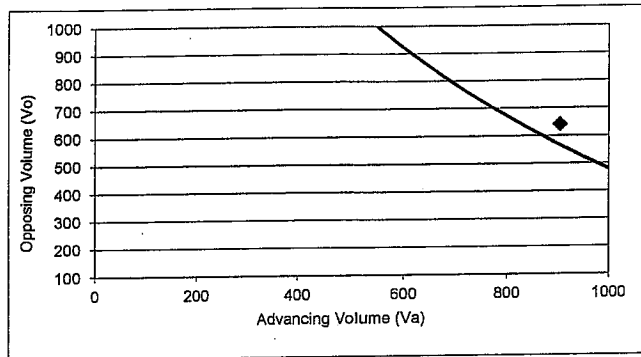
**Right Turn Taper Warranted: NO**

### Northbound Left Turn Lane Warrants

Percentage Left Turns %lt 0.6 %

Advancing Volume Threshold AV 830 veh/hr

If  $AV < Va$  then warrant is met



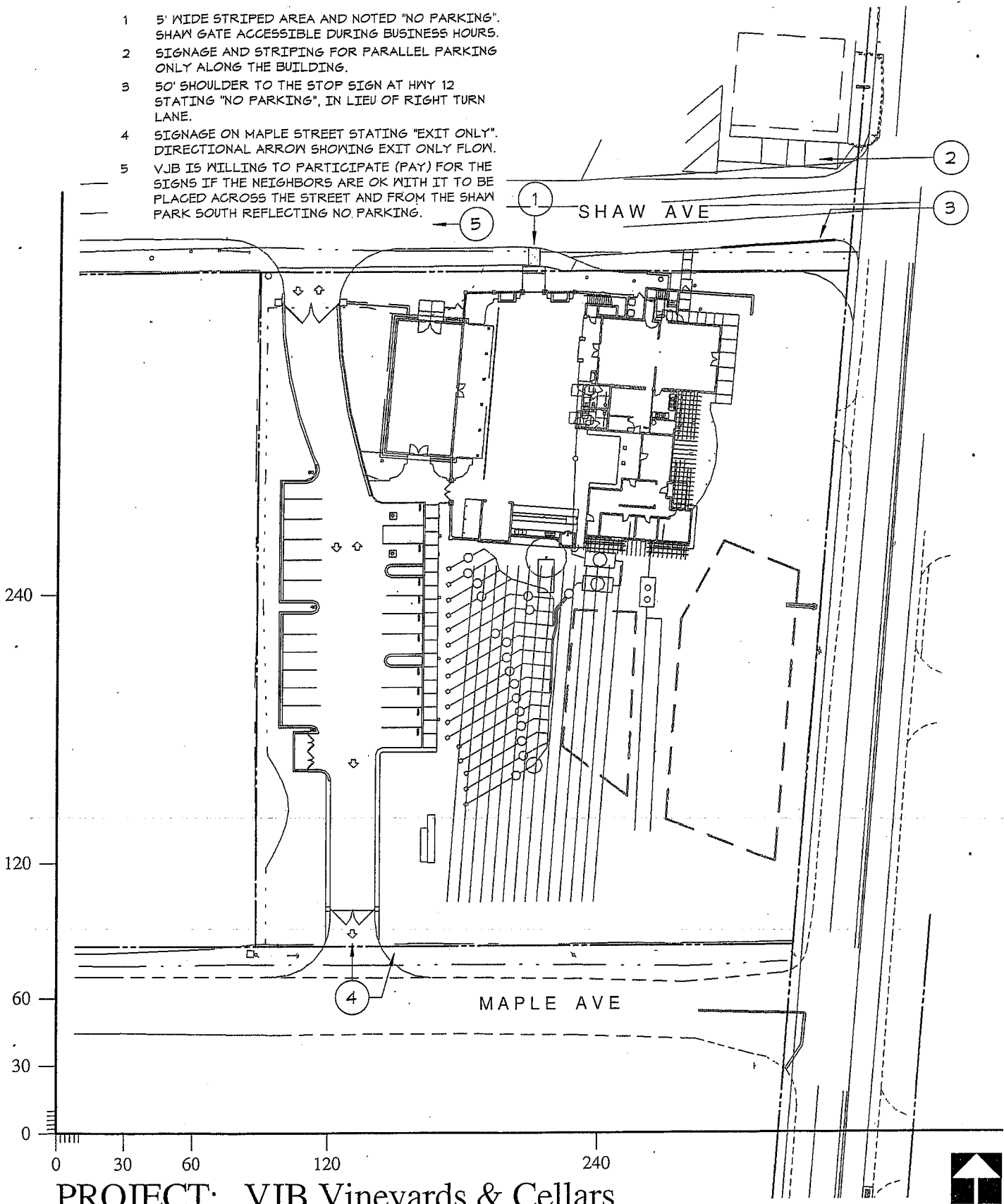
◆ Study Intersection  
 Two lane roadway warrant threshold for: 45 mph  
 Turn lane warranted if point falls to right of warrant threshold line

**Left Turn Lane Warranted: YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.  
 The right turn lane and taper analysis is based on work conducted by Cotirell in 1981.  
 The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

NOTES

- 1 5' WIDE STRIPED AREA AND NOTED "NO PARKING". SHAW GATE ACCESSIBLE DURING BUSINESS HOURS.
- 2 SIGNAGE AND STRIPING FOR PARALLEL PARKING ONLY ALONG THE BUILDING.
- 3 50' SHOULDER TO THE STOP SIGN AT HWY 12 STATING "NO PARKING", IN LIEU OF RIGHT TURN LANE.
- 4 SIGNAGE ON MAPLE STREET STATING "EXIT ONLY". DIRECTIONAL ARROW SHOWING EXIT ONLY FLOW.
- 5 VJB IS WILLING TO PARTICIPATE (PAY) FOR THE SIGNS IF THE NEIGHBORS ARE OK WITH IT TO BE PLACED ACROSS THE STREET AND FROM THE SHAW PARK SOUTH REFLECTING NO PARKING.



**PROJECT: VJB Vineyards & Cellars**

DATE: 4/8/14

SCALE: 1" = 60'-0" (if faxed, n.t.s.)

**Exhibit 2**